ARCHAEOLOGICAL SURVEY OF INDIA

प्रत्नकीर्तिमपावृणु

HANDBOOK

TO THE

CENTENARY EXHIBITION

New Delhi, 14th to 31st December 1961

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PREFACE

On the occasion of its Centenary, the Archaeological Survey of India is holding an Exhibition intended to depict, within modest proportions, the vast archaeological wealth of the country. Considerations of space and risks involved in transporting fragile and delicate objects from distant places have been the factors to limit the extent of the Exhibition.

The objects included in the Exhibition have been drawn from different sources. While the collections of the Archaeological Survey itself account for a large portion of the exhibits, the rest have been drawn from the collections of different museums and other institutions all over the country and of a few individuals. It is gratifying to record here that in not a single case was our request for the loan of objects for this Exhibition refused; on the contrary, it was universally received with favour and even enthusiasm. This ready response is perhaps a testimony to the country-wide popularity and recognition of the work and worth of the organization the Centenary of which we are now celebrating. We are deeply grateful to all these institutions and individuals, mentioned on pp. v to vii, for their generous co-operation and support but for which the Exhibition would have remained very incomplete in its contents.

Sincere thanks are also due to the National Museum of India, the National Archives of India

and the Handloom Board for the loan of some show-cases.

An exhibition of this kind must necessarily be set up in a hurry, for the objects to be included cannot be obtained very long before the date of the opening. This will explain the shortcomings that the visitor may notice in the Exhibition and this Handbook. Such shortcomings, it is hoped, will be regarded with indulgence.

Instead of producing a conventional catalogue enumerating each and every object in the Exhibition, it has been thought appropriate to describe the nature and contents of each Section in general terms—thus introducing the public to Indian archaeology—and to draw attention to the important exhibits.

The 2nd December 1961

A. G.

LIST OF INSTITUTIONS AND INDIVIDUALS WHO HAVE LENT OBJECTS TO THE EXHIBITION

STATE MUSEUMS

Andhra Pradesh

Archaeological Museum, Alampur
State Museum, Hyderabad

Assam

State Museum, Gauhati

Bihar

Patna Museum, Patna

Gujarat

Museum and Picture-gallery, Baroda

Jammu and Kashmir

Sri Pratap Singh Museum, Srinagar

Kerala

Government Museum, Trivandrum

Madhya Pradesh

State Museum, Gwalior
Central Museum, Indore
Mahant Ghasidas Memorial Museum, Raipur

Madras

Government Museum and Art-gallery, Madras

Maharashtra

Kolhapur Museum, Kolhapur
Central Museum, Nagpur

Mysore

Government Museum, Bangalore

RAJASTHAN

Archaeological Museum, AMBER

Ganga Golden Jubilee Museum, BIKANER

Sardar Museum, JODHPUR

Museum and Saraswati-Bhandar, KOTAH

Victoria Hall Museum, UDAIPUR

UTTAR PRADESH

State Museum, LUCKNOW

Archaeological Museum, MATHURA

OTHER GOVERNMENT ORGANIZATIONS

Department of Archaeology, West Bengal, CALCUTTA

Department of Archaeology, Madhya Pradesh, BHOPAL

Department of Archaeology, Mysore, MYSORE

National Archives of India. NEW DELHI

Administration of Pondicherry, PONDICHERRY

Department of Archaeology, Gujarat, RAJKOT

OTHER MUSEUMS

Prince of Wales Museum of Western India, BOMBAY

Indian Museum, CALCUTTA

National Museum of India, NEW DELHI

Art-gallery, THANJAVUR

UNIVERSITIES

Maulana Azad Library, Muslim University, ALIGARH

Department of Ancient History, Culture and Archaeology, University of Allahabad, ALLAHABAD

Department of Ancient History and Archaeology, Maharaja Sayajirao University, BARODA

Asutosh Museum of Fine Art, University of Calcutta, CALCUTTA

Department of Anthropology, University of Calcutta, CALCUTTA

Kannada Research Institute, Karnatak University, DHARWAR

Deccan College Post-graduate and Research Institute, University of Poona, POONA

Department of Ancient History and Archaeology, University of Saugor, SAGAR

Department of Ancient Indian History, College of Indology, Hindu University, VARANASI

OTHER INSTITUTIONS

Karanthai Tamil Sangham, THANJAVUR

K. P. Jayaswal Research Institute, PATNA

INDIVIDUALS

Shri Abdul Raza Maulavi, CAMBAY

Shri Ali Mirza Ali Miyan, CAMBAY

Miss Beatrice de Cardi, LONDON, in collaboration with the Department of Archaeology, Government of Pakistan

Shri S. T. Srinivasagopalachari, MADRAS

Shri R. K. Lamture, TER

Shri Rajaram Chatrapathy, Senior Prince of Thanjavur, THANJAVUR

ARCHAEOLOGICAL SURVEY OF INDIA

Archaeological Museum, AMARAVATI

Fort Museum, DELHI

Archaeological Museum, HAMPI

Archaeological Museum, KHAJURAHO

Archaeological Museum, KONDAPUR

Fort St. George Museum, MADRAS

Archaeological Museum, NAGARJUNAKONDA

Archaeological Museum, NALANDA

Archaeological Museum, SANCHI

Archaeological Museum, SARNATH

Other collections

CONTENTS

HANDBOOK TO THE CENTENARY EXHIBITION

INTRODUCTION

The Exhibition is divided into ten Sections, mentioned in the Contents (p. ix). The first nine of them are to be seen in this Pavilion, while the last is located in the adjoining National Museum building.

The visitor enters the Pavilion through a lofty gateway. It is the replica of a magnificent *torana* erected by the Kakatiya ruler Ganapati in the thirteenth century as one of the four entrances to a temple built by him at Warangal (Andhra Pradesh).

In front the visitor sees the replica of the well-known lion-capital of Asoka, now made all the more familiar by its having been adopted as the State Crest of India. The lion-capital originally surmounted a pillar erected by Asoka at Sarnath, near Varansi, where Buddha preached his first Sermon. The four spirited lions, seated back to back, are placed on an abacus, on which are carved four wheels, with four running animals in between. The abacus in turn rests on a block of stone carved in the shape of an inverted lotus. The sculpture is the best representative of Mauryan art and is definitely one of the best ever produced in India.

The tall pillar one sees in front, in the centre of the pavilion, is the replica of a single-stone pillar of Asoka, standing, with the lion-capital still in position,

at Lauriya-Nandangarh in north Bihar. It bears a set of six Pillar-edicts of Asoka.

To the south-east of the pillar is the replica of an octagonal stone column in the Diwan-i-Khass at Fatehpur-Sikri, the capital-town built by Akbar in about 1570. The column is surmounted by an enormous circular capital consisting of three tiers of radiating brackets. The four openings at the top of the replica indicate the position of the broad beams which reach the four corners of the original building.

To the north-east of the Asokan pillar is a marble column with capital, from the Mughul fort at Agra. It is lavishly ornamented with scrolls of inlay-work in variegated colours—typical of the art of Shah Jahan (1627-58).

In the south-eastern corner of the Pavilion, near the Section devoted to Inscriptions, lies the replica of a rock at Girnar in Gujarat, which bears in bold clear-cut letters the fourteen Rock-edicts of Asoka.

In the rear part of the Pavilion, leading to the Auditorium, stands the replica of another *torana*, from Sidhpur in Gujarat. It formed the entrance of the now-ruined grand temple Rudramahalaya, the construction of which was commenced by the Chaulukya ruler Mularaja in the tenth century and completed by Siddharaja Jayasimha of the same dynasty in the twelfth.

All the replicas are of the same size as the respective original monuments, having been cast out of moulds of the monuments themselves.

Section I

THE STONE AGE[1]

The earliest identifiable remains of the ancient man are confined to crude stone tools fashioned and used by him for hunting and other purposes and, occasionally, fossils, both human and of the animals hunted by him. All these are often found lying discarded in geological formations like the old terraces of rivers, caves and rock-shelters. This stage, when stone was the all-purpose material in the economic life of man, is known as the Stone Age.

It is customary to divide the Stone Age into three Ages, viz. the Palaeolithic or Old Stone Age, the Mesolithic or Middle Stone Age, and the Neolithic or New Stone Age, each of which marks a distinct advance in food-economy, changing from a fully food-gathering through specialized and efficient food-collection to domestication of plants and animals. The Palaeolithic Age falls within the geological sub-division known as the Pleistocene epoch, which, in Europe, was marked by the occurrence of four Glacial or Ice Ages separated by Interglacials in the northern temperate regions and, possibly, by corresponding alternating phases of Pluvials (wet) and Interpluvials (dry) in the southern tropical plains. The study of the palaeolithic man is linked with these climatic changes, which, incidentally have also been generally recorded in India.

The first palaeolithic tool in India was discovered almost a hundred years ago in 1863 from a gravel-pit at Pallavaram, near Madras, by Robert Bruce Foote

[1]Contributed by Shri B. K. Thapar.

of the Geological Survey of India. Thereafter, palaeolithic tools were recovered from many parts of India. It was, however, not until 1935 that a systematic attempt was made to correlate the glaciations of Europe (Alps) and of Kashmir (Himalayas) by the expedition led by De Terra. As a result thereof, the terraces of the river Sohan, a tributary of the Indus (now in Pakistan), were correlated with the glacial phenomena of Kashmir, which, in turn, were equated with those of the Alps. In the meantime, L.A. Cammiade and M. C. Burkitt had established in the Krishna basin of south India a sequence of Pluvials and Interpluvials. A geological correlation for the Indian paelaeolithic industries was, therefore, in the making.

In India, unfortunately, no fossil-remains of the palaeolithic man have, so far, been discovered. The earliest indication of tool-making, however, seems to be in the last phase of the second Glacial or at the beginning of the second Interglacial, nearly four hundred thousand years ago. The implements of the lower Palaeolithic Age, usually made of quartzite, fall into two main categories:

(a) pebble implements, made by chipping the upper part of a pebble on one side, so as to produce a steep cutting-edge; they could have been used as choppers or scrapers and are often classed as 'Sohan', after the name of the river where they were first found; and

(b) handaxes, which are generally pear-shaped or oval and worked to a continuous edge on both the faces. Other shapes met with in the industry represented by the handaxes are cleavers with a broad chisel-edge and ovates.

From the technique of working the pebble-chopper industry is labelled as unifacial and the handaxe as bifacial. The present evidence indicates a differential distribution for the two classes of tools. Whereas the former is confined to the sub-Himalayan regions of the Panjab, the latter is dominant in the Peninsula, though there is a mixture of the two here and there.

On display here are tools of both the categories (pl. I A) collected from the valleys of rivers, viz. Sohan in the north, Narmada, Chambal and Son in central and upper India, Burhabalang in Orissa and Godavari and Krishna in the south-west.

An interesting exhibit is a diorama showing the terrace-system of the river Banganga, a tributary of the Beas in the foothills of Panjab. This is not without significance, for it is the first site within the political limits of present-day India where river-terraces with an exclusively Sohan sequence have been identified.

The handaxe-cleaver industry, called Series I, was followed, with a prominent break indicating a long interval, by an industry labelled as Series II, which consisted mostly of flakes, scrapers and points. Fossil-remains of *Bos namadicus*, found in association with this industry at Nevasa, indicates that its horizon was still within the Pleistocene. This corresponds to the Middle Stone Age of the African terminology and the Upper Palaeolithic of the European. The tools of this Series were made of fine-grained stones like jasper, agate or flint and are smaller in size than those of Series I. Such an industry clearly indicates a change from the previous hunting-methods. The typical tools (pl. I B) of this Series collected from different regions, like Maheswar on the Narmada,

Nevasa in the Godavari valley, Damoh and Bundelkhand in Madhya Pradesh, Nagarjunakonda in Andhra Pradesh, etc., are on display here. Amongst them are the recurrent types like the carefully-finished hollow scraper, point-*cum*-hollow scraper, point and, occasionally, the crescent, as in Europe.

No well-defined post-Glacial Mesolithic Age has so far been recognized in India. It is likely that the industry represented by Series II transmuted itself through as yet unidentified stages into the microlithic one, which may be called Series III.

Microliths have a fairly wide distribution in India, both in space and time, the earliest being those from the tip of the Peninsula, found embedded in the fossil sand-dunes locally known as the *teris*. By relating the *teris* with the ancient sea-levels, a modest date of 4000 B.C. has been proposed for this industry. Birbhanpur, in Burdwan District of West Bengal, also yields a comparable industry. The tools essentially comprise hunting-types like the blade, point, scraper, lunate and awl. In later phases, geometrics, viz. the trapeze and the triangle, make their appearance. About this time or slightly later hand-made pottery came into being, as attested at Langhnaj in Gujarat. Beginnings in domestication of animals are also in evidence. Type-tools (pl. II A) from the *teris*, Birbhanpur, Khandivli near Bombay, Orissa, the Kangsabati valley in West Bengal, Chakradharpur in Bihar, Singrauli near Mirzapur, Hoshangabad in Madhya Pradesh, Rohri and Sukkar in Sind and Langhnaj in Gujarat, along with the two sherds from the last-named site, are exhibited here.

The hall-mark of the Neolithic Age is the use of the polished stone tools, including mace-heads and

quern-stones, and of pottery indicative of the beginning of the settled farming communities and stock-breeding. Polished stone tools, consisting largely of axes and adzes, have been obtained from several sites in India (pl. II B). Evidence from three sites representing three principal regions may be reviewed here. Apart from the common element of grinding or polishing stone tools, the assemblages in each region are different. The earliest of these perhaps are those from Burzahom in Kashmir. Here the industry is associated with a pit-dwelling people and is mixed with polished bone tools (pl. III A), comprising the awl, harpoon, point, needle, chisel and a burnished grey pottery prominently showing basket-designs on the base-portions. The tools of eastern and north-eastern India are associated with a hand-made coarse tempered red ware. In the Deccan, however, the tools are found along with microliths and a coarse grey burnished ware quite unlike that of Burzahom.

Neolithic tools along with their assemblages from Burzahom, Kuchai in Orissa, Sanganakallu in Andhra Pradesh, T. Narasipur in Mysore, etc., are on display. Noteworthy amongst these is the shouldered celt from eastern India.

SECTION II

FROM PROTOHISTORY TO HISTORY[1]

EARLY CULTURES OF THE NORTH-WEST

With the advent of metal great socio-economic changes took place. This resulted in the appearance, in the third millennium B.C., of scattered bronze-using communities in Sind and the highlands of Baluchistan, represented principally at such places as Kulli, Mehi, Amri and Nal. While all of these shared basic characteristics and a common technology, they seem to have developed into self-contained units in comparative isolation.

On display are the wheel-made, well-baked pottery, attractively painted with geometric and semi-realistic motifs, seals, metal objects and terracotta figurines from Kulli, Mehi, Shahi Tump and Anjira and Siah-Damb in the Surab region of central Kalat in Baluchistan and Amri in Sind.

THE HARAPPA CULTURE

While some of the features of these peasant cultures are common to the well-known Indus civilization, none of them can be regarded as the parent of the latter, which, with its metropolitan cities like Mohenjo-daro and Harappa, is known to be the most extensive civilization of the pre-classical world. As a result of recent work, it is found to extend as far south as Bhagatrav on the Kim estuary, approximately 260 kilometres north of Bombay, and as far east as Alamgirpur, 50 kilometres to the north-east of Delhi

[1]Contributed by Shri B. K. Thapar.

in the upper Ganga-Yamuna valley. The outstanding features of this civilization, also labelled the Harappa civilization, after the name of the site where its remains were first encountered, are: (a) systematic lay-out of the cities, (b) well-regulated drainage-system, (c) use of kiln-burnt bricks, and (d) picto-graphic or symbolic script. Among the typical objects, mention may be made of steatite seals showing generally animal figures along with an inscription in the hitherto undeciphered script, terracotta figurines, both animal and human, bronze objects, beads of semi-precious stones, weights, long ribbon-like blades of chert and wheel-made black-painted red pottery with distinctive shapes and designs of paintings. The present dating of the culture—2500 to 1500 B.C.—is based on its contacts with the contemporary civilizations of Iraq.

Recent excavations at Rupar in the foothills of the Siwaliks, Alamgirpur on the Hindon, a tributary of the Yamuna, and Kalibangan along the dried-up bed of the ancient Sarasvati have indicated the essential uniformity of the culture in the northern zone inasmuch as the feature of the double mound, one representing the citadel and the other normal habitation, as at Mohenjo-daro and Harappa, has been found at Kalibangan. In Gujarat, some minor local variations in fabric, shapes and designs of pottery, besides the normal Harappan elements, are in evidence. Since the ancient settlement was not very far from the sea, the township was built on a high mud-brick platform, remains of which have been exposed. The new features revealed at the principal excavated site of Lothal are a dockyard and a cemetary, in some of the excavated graves of which two bodies were interred together.

Besides the typical finds, viz. pottery, seals (pl. IV A), terracotta figurines (pl. IV B) and bronze objects from sites like Harappa, Mohenjo-daro, Rupar, Alamgirpur, Kalibangan, Rangpur and Lothal, models of the dockyard and a double-burial from the last-named site are also on display.

It was hitherto believed that this mighty civilization came to a sudden end. Such a surmise, however, is unwarranted. In northern India the picture is still nebulous. At Harappa itself, the culture known to the archaeologist as Cemetery H was found overlying the true Harappa culture. It was mainly represented by burials of two categories. The paintings on the burial-jars are totally different from those of the Harappan pottery and betray a different tradition. The evidence of Bara, near Rupar, as also of the late levels of Rupar itself, however, does present some stages of degeneration. On the southern flank, excavations at Lothal, Rangpur, Rojdi, Prabhas Patan and Bhagatrav in Gujarat have clearly demonstrated some stages of transmutation into successive chalcolithic cultures.

In the latter assemblages the seals show poor execution and often do not bear animal figures; the long ribbon-flakes are replaced by smaller blades. New elements based upon fresh initiative, as seen by the various ceramic traditions, were added to this devolved culture.

THE CHALCOLITHIC CULTURES OF CENTRAL INDIA AND THE DECCAN

The post-Harappan chalcolithic cultures, which were widespread from the second half of the second millennium to the first half of the first millennium B.C.,

though sharing the basic characteristics like the use of microliths and red pottery painted with black, had regional variations or ramifications showing diversity of details, as seen from the excavations at Ahar in Rajasthan, Nagda on the Chambal, Navdatoli on the Narmada, Prakash and Bahal on the Tapti and Jorwe, Nasik, Nevasa and Daimabad in the Godavari valleys. At Navdatoli, certain extraneous elements in pot-forms (pl. V A), comparable with similar types in Iran, have been identified. According to the inter-relationship worked between these cultures, the one represented at Jorwe is found to be somewhat later than those on the Narmada and Tapti. A noteworthy feature of these cultures was the method of burial whereby fractional skeletal remains were deposited into the urns. The system of extended burial was also known. Typical objects from each region are on display.

North India

As stated above, in the northern plains no integral culture succeeding the Harappa culture has so far been identified. The period following the Harappa culture is the Dark Age. To this period are assigned the series of Gangetic copper hoards containing such types as harpoons, antennae swords, anthropomorphic figures, rings, flat and shouldered celts and bar celts. On the basis of the circumstantial evidence, from sites like Bahadarabad and Rajpur Parsu, a coarse ill-fired ochre-colour ware has been associated with these copper objects. Recent explorations have revealed the occurrence of this ware at Bhatpura and Manpur, both in Bulandshahr District. A hitherto unreported copper hoard, comprising a channel-spouted bowl, a plain bowl, a chisel, a celt and a curved axe-blade,

from Khurdi in Nagaur District of Rajasthan (pl. III B), deserves special attention. Significance is attached to the channel-spouted bowl, an identical form of which, noted for its foreign affinities, is known in the pottery from Navdatoli. The exact chronological horizon of these hoards has not, however, been determined. On general considerations, they may be dated somewhere in the second half of the second millenium B.C.

The Painted Grey Ware

Continuing the story of the Dark Age, we find at Hastinapura a succession of five periods, the earliest yielding the same class of ochre-colour ware as that of Bahadarabad, Manpur and Bhatpura. It is, however, Period II that deserves our special attention in this context. The culture of the Period is characterized by a distinctive class of pottery (pl. V B) known as the Painted Grey Ware. This Ware ranges from ash-grey through greyish brown, sometimes dark in surface-colour, and bears a variety of painted patterns, usually in black pigment. The commonest shapes are the straight-sided bowl and the convex-sided dish, although the *lota*-shaped vase is also known. Agriculture and cattle-breeding, supplemented by hunting, seem to have been the primary occupation of the people. Although copper was the principal metal used during this period, evidence of iron in the form of lumps of ore is also available in the upper levels.

A similar chronological horizon of this Ware has been revealed at Ahichchhatra, Rupar and Alamgirpur; at the latter two sites it is found superimposed over deposits yielding relics of the Harappa culture. Explorations have revealed that the Ware extended up to Lakhiyopir (Pakistan) on the west and Vaisali,

though in a degenerate form, on the east, Rupar on the north and Ujjain on the south. The Ware is ascribed to *circa* eleventh to seventh century B.C.

On display are the typical finds of the culture from Hastinapura, Ahichchhatra, Rupar and other explored sites of Panjab and north Rajasthan.

THE HISTORICAL PERIOD

With the advent of iron, certain standard elements of civilization can be discerned. A landmark, however, is the occurrence of a highly individualistic glossy ware, often black, known to archaeologists as the Northern Black Polished Ware. It has been reported from a number of widely-distributed sites like Charsada and Udegram (Pakistan) in the north, Kolhapur and Chebrolu in the south, Chandraketugarh on the east and Prabhas Patan on the west. The remarkable uniformity in technique and appearance of this Ware suggests a common centre of manufacture. On the sites located in the central Ganga basin, like Kausambi, Rajghat, Vaisali, etc., the Ware is particularly abundant. Some of the sites in this region, may, therefore, be factory-sites. The shapes represented are the common bowl and the convex-sided dish with an analogy to the Painted Grey Ware. In the peripheral regions it is associated with the Mauryan and post-Mauryan levels, while in the central region its range has been dated with some measure of certainty to *circa* sixth to second century B.C.

This is the period which witnessed such important events as the coming of Buddha and Mahavira. In the Ganga basin large fortified cites were established; of them mention may be made of Ahichchhatra, Kausambi, Sravasti, Rajgir and Vaisali. Burnt bricks were freely used. Coinage came into existence.

The culture represented in Period III both at Hastinapura and Rupar corresponds to this age. Pottery and finds of a comparable phase from Ahichchhatra, Kausambi and Rajghat in Uttar Pradesh, Kumrahar (Pataliputra), Vaisali, Rajgir and Sonpur in Bihar, Ujjain in Madhya Pradesh and Chandraketugarh in West Bengal are on display.

Nagarjunakonda

We may review the sequence obtained at the well-known Buddhist site of Nagarjunakonda in the lower Krishna basin, which is threatened with submergence as a result of the construction of a 80-metre high dam across the Krishna. Excavations have revealed that the Nagarjunakonda valley had been under occupation since palaeolithic times. The palaeolithic tools comprise handaxes, ovates, cleavers, etc. This is followed by an industry comprising flake-blades, scrapers, etc., akin to Series II. The next sequence yields microliths of the non-geometric type. Besides, the remains of the polished stone axe and megalithic cultures have also been brought forth. The assemblage represented by the former includes a variety of axes, adzes, fabricators and mace-heads, while the latter show some new elements of burials.

Of the historical period at Nagarjunakonda, varied remains have been laid bare. These include many Buddhist *stupas*, other *chaityas* and *viharas* and Brahmanical temples, assignable mostly to the Ikshvaku kings of the early centuries A.D. Other structures exposed comprise an extensive stepped *ghat*, a stadium and fortifications. The antiquities include terracottas, relic-caskets, sculptures and coins, besides two Roman *aurei*.

Other sites in south India

With this sequence in the lower reaches of the river Krishna we may pass on to the Karnataka region and the Coromandal coast, where systematic work at the carefully-selected sites of Arikamedu, Brahmagiri, Sanganakallu, Piklihal, Maski, Utnoor and T. Narasipur has established a workable culture-index for the region.

From bottom upwards the cultures are: (a) the 'true neolithic' culture, characterized by stone axes, microliths and grey pottery; (b) the polished stone axe culture, characterized by the use of copper and a painted black-on-red-ware; (c) the megalithic culture, characterized by the use of iron, the Black-and-red Ware and the practice of erecting megalithic monuments; (d) early historical culture, characterized by the occurrence of the Russet-coated Painted Ware and wares inspired by and imported from Rome, like the Rouletted Ware and the Arretine Ware, and the currency of coinage including Roman. Of these, phase (a) has already been mentioned under Section I.

The representative pottery and finds from each region are on display.

East India

In east India three sites have so far been excavated. Of these, the fortified township of Sisupalgarh provides the key-sequence which consisted of three Periods. The site remained under occupation from *circa* 300 B.C. to A.D. 350. Throughout this occupation there was one integral culture with gradual changes in some industries, notably the ceramic. The defences were initially built up at the beginning of the second century B.C. and continued through its four phases till the abandonment of the site.

A fixed point in the chronology of this site is the occurrence of the Rouletted Ware in a mid-level of Period II B.

Jaugada, also a fortified township, provides, in general, an identical sequence.

Tamluk, an ancient port, had deposits, rich in Sunga terracottas following, after an interval of time, a neolithic settlement.

Typical pottery and other finds from Sisupalgarh and Jaugada are on display.

Section III

MEGALITHS[1]

Peninsular India contains a very large number of megalithic monuments which vary in type and in the burial-customs represented therein, but share common culture-traits like the distinctive Black-and-red Ware and the use of iron. A ground-survey of the monuments to determine their range in type and distribution was begun by the Archaeological Survey of India in 1944 and has yielded fruitful results. As a result of this Survey, the types in Chingleput District and the former States of Pudukottai and Cochin have been classified. In the meantime, the excavation of megalithic burials at Brahmagiri (Mysore), Porkalam (Kerala), Maski (Mysore), Sanur and Amirthamangalam (Madras), and Nagarjunakonda and Yelleswaram (Andhra Pradesh) have further enriched our knowledge about these burials. The culture represented by these megalithic monuments has been dated to range between *circa* 200 B.C. and the middle of the first century A.D. In the light of recent work, however, the culture may perhaps had an earlier beginning.

Photographs and drawings of the principal types of monuments, either surveyed or excavated, along with the representative pottery and other objects recovered therefrom, are on display.

[1]Contributed by Shri B. K. Thapar.

SECTION IV

METHODS AND RECORDS[1]

The Archaeological Survey of India is in charge of some three thousand monuments spread all over the country. Their preservation demands highly-specialized technique comprising diverse engineering and scientific methods combined with knowledge of ancient art and architecture, not to speak of constant vigil and a widespread organization. No wonder that conservation of monuments is the leading function of the Survey; to it is directed the major part of its resources.

In undertaking any structural repairs to monuments the supreme consideration is that the ancient features of the monuments should not be altered. Always with this in view, the repairs may consist of major projects like guniting, grouting under pressure to make the core of a monument watertight, replacement of huge pieces of fractured and decayed stone, underpinning of weak foundations, etc., apart from routine measures, such as pointing, periodical clearance, fencing and the like. Generally speaking, it is the policy of the Survey not to restore the missing parts of a monument unless this is necessary for the stability of the surviving ones. The intention is to preserve a monument as it is.

On display here are photographs showing the condition of a few monuments before the Survey took charge of them and as they are now. The vast improvements are readily noticeable.

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[1]Contributed by Dr. B. B. Lal and Shri S. Roy.

Monuments are very often rich in decorative stonework and sculptures; sometimes they are embellished with mural paintings, terracotta (burnt-clay) plaques, painted and plain stuccoes, glazed tiles and stone inlay. The problems posed by these monuments are to be studied in the field, as no two of them are alike. Laboratory investigations are also called for in order to determine the causes of decay.

An essential aid to such processes of conservation is modern scientific methods, including physical and chemical analysis of the fabric and evolution of suitable preservatives. Paintings, including world-famous ones, such as those at Ajanta, have to be treated and preserved by the latest scientific methods. Delicate sculptures and carvings have to be attended to on the spot.

The above scientific work has to be extended to portable antiquities in the laboratory. Fragile and delicate objects of a vast array of material have to be treated and preserved; sometimes their broken fragments have to be pieced together. Of particular interest is the treatment of the large bronzes which are the pride of the country.

Such scientific work includes careful recording, photographic and otherwise, of monuments and objects to be treated, before, during and after conservation. Such records and methods are illustrated here.

Archaeological excavations bring out of the earth thousands of objects produced and handled by the ancient man. But to understand him thoroughly it is necessary to know the environmental conditions in which he lived. For this purpose it is necessary to analyse physically and chemically the soil on which

he lived. The methods of such analyses are demonstrated here.

Full-size copies of the Ajanta paintings, prepared by the artists of the Survey, form an interesting record.

Of late, the Survey has undertaken preparation of an authentic archaeological atlas of India. Some of the maps to be included in the atlas may be seen here.

Some old and important documents on exhibition pertain to the Taj-Mahal: they consist of drawings of the monument in the traditional style and its early paintings and photographs. Some rare archaeological publications, records of travel (the earliest of them dating back to 1597, books on history and geography and editions of classical texts, all from the collection of the rich Central Archaeological Library, are of great historical interest.

A part of this Section is devoted to the display, in original or in photographs, of selected documents illustrative of some of the interesting phases of the early history of archaeology in India. The earliest document in this collection is a letter (in facsimile) from Dr. Sumuel Johnson written in 1774 to Warren Hastings, hoping that the latter 'will examine nicely the Traditions and Histories of the East, that he will survey the remains of its ancient Edifices, and the vestiges of its ruined cities.' Equally significant is the letter which James Prinsep wrote in 1837 to the Government of India, pleading, with a remarkable foresight, for the development of a National Museum in the country. Another document which will be found to be of interest is Prinsep's private letter to

Auckland, dated the 28th March 1838, announcing the discovery he had made in the Asokan inscription on the Girnar rock of the names of Antiochos of Syria, Ptolemy Philadelphos of Egypt and Magas of Cyrene—a discovery which provided archaeology with a firm chrondlogical basis.

Prominent among the documents relating to later history are those which deal with the foundation of the first Archaeological Survey of India in December 1861 under Alexander Cunningham (pl. VI). The group contains the famous memorandum which Cunningham prepared embodying his plan for archaeological investigations, the archaeological sketch map of northern India drawn by him, showing important historical sites, two pages from Lord Canning's Minute proposing the setting up of an archaeological survey for upper India, and some pages from Cunningham's autograph daily reports on the exploratory work done by him.

Among the important documents relating to the next phase are the celebrated Minute of Mayo, dated the 30th May 1870, which reconstituted the Archaeological Survey with Cunningham as the first Director General, and Public Resolution, dated the 2nd February 1871, sketching out the functions of the Survey.

Other documents of interest include: Cunningham's letter to Government of India, dated the 15th February, 1885, giving a summary of his achievements, Government Circular, dated the 8th September 1886, forbidding the digging of archaeological sites without the previous consent of Archaeological Survey and Buehler's letter, dated the 9th November 1894, urging the need for systematic and thorough excavations.

The collection ends with an interesting batch of documents illustrating the dawn of the new era which was inaugurated by Lord Curzon's famous Minute of the 23rd September 1900.

SECTION V

ARCHITECTURE[1]

The history of Indian architecture, as revealed by extant remains, commences from the excavated structural material of the Harappa culture, which gives a good idea of ancient building-design, brick-laying and town-planning. After a long gap from this protohistoric period we have the earliest monuments of the historic period: they are mostly religious in character, though a few secular structures, e.g. the remains of the Mauryan palace at Pataliputra, are known. The earliest of the historical monuments are the *stupas*, mostly Buddhist and rarely Jaina. The most well-known and elaborate ones are the Buddhist *stupas* and accompanying *viharas* or monasteries built from the time of Asoka (B.C. 273-32) right down to the final days of Buddhism in India. By nature, the Buddhist *stupa* is either funerary or commemorative or, sometimes, votive. Originating as a piled-up burial-tumulus, the *stupa* gradully assumed a characteristic architectural shape, with a dome (*anda*) raised over one or more terraces or over a circular platform (*medhi*), and surmounted by a railed structure (*harmika*) enclosing the shaft of the distinctive umbrella (*chhatra*). The whole complex may be surrounded by a perambulation enclosed by one or more series of railings, originally wooden but later replaced by stone in imitation of woodwork, as at Sanchi and Bharhut. The railing, where it exists, is pierced

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[1]Contributed by Shri K. R. Srinivasan and Dr. Z. A. Desai.

on one or all the cardinal sides by elaborately-carved festoon-gates (*toranas*). The circular *medhi* of the *stupas* of south-east India (second century B.C. to fourth century A.D.), as at Amaravati and Nagarjunakonda, was projected into platforms on the four cardinal sides, with a row of tall monolithic columns over them, called *ayaka-stambhas*. Internally, they show an attempt to reduce mass and save brickwork by a system of radial or concentric walls, the interspaces filled with earth. The *stupas* in the north-west of India, of the Gandhara style, belong to the first five centuries of the Christian era. Though the earlier ones have hemispherical domes, the later ones are made imposing by being raised on lofty terraces and crowned by multiple receding umbrellas. They are surrounded by small *stupas*, votive in nature and containing figures of Buddha in pilaster-niches. The Indo-Corinthian style of the pilasters and the elaborate stucco-work form their characteristic features. The accompanying monasteries, in general, consist of a row of monks' cells surrounding a courtyard. In the monasteries of the south-east, the entrance was flanked on either side by apsidal shrines with a *stupa*, symbolic of Buddha, inside one and a pair of feet or the figure of Buddha in the other.

Many of the *stupas* enclose relic-caskets (pl. VII), which, often, are in shape miniature models of the *stupa* itself, made of gold, crystal or other material. They are enclosed sometimes in bigger stone relinquaries at particular spots inside the *stupa*. The relics are the corporeal remains (*dhatu*) of Buddha or a principal Buddhist monk, placed along with gold flowers and other objects. The Piprahwa and the Bhattiprolu relic-caskets are believed to have contained the relics of Buddha himself and are inscribed

in characters of about the third and second centuries B.C. respectively. These caskets, in their make and finish, display high degree of perfection of the lapidary and goldsmith's art.

Asoka initiated the mode called 'rock-architecture' when he excavated the resorts for the Ajivaka ascetics in the hard granite of the Barabar and Nagarjuni hills near Gaya. Otherwise, all his other stone monuments, such as the columns and capitals which he erected in many places, were carved out of the softer sandstone, quarried and transported to the respective places, their distinctive feature being a very high mirror-like polish. The caves try to reproduce the facade and interior aspects of contemporary brick-and timber-architecture. After him, this mode was carried over to the softer trap rocks of the Deccan. Numerous Buddhist *chaityas* or temples and *viharas* or monasteries were excavated under the Satavahanas and their successors at Bhaja, Karla, Nasik, Ajanta, etc., covering a period from the second century B.C. to the sixth century A.D., with a blank interval in the third and fourth centuries. While the earlier *chaityas* are apsidal, stylar or astylar, with a *stupa* as the object of worship at the apse-end and an elaborately-carved facade in front, the later ones come to have the figure of Buddha, either in front of the *stupa* or in place of it. The *viharas* follow the model of the structural ones.

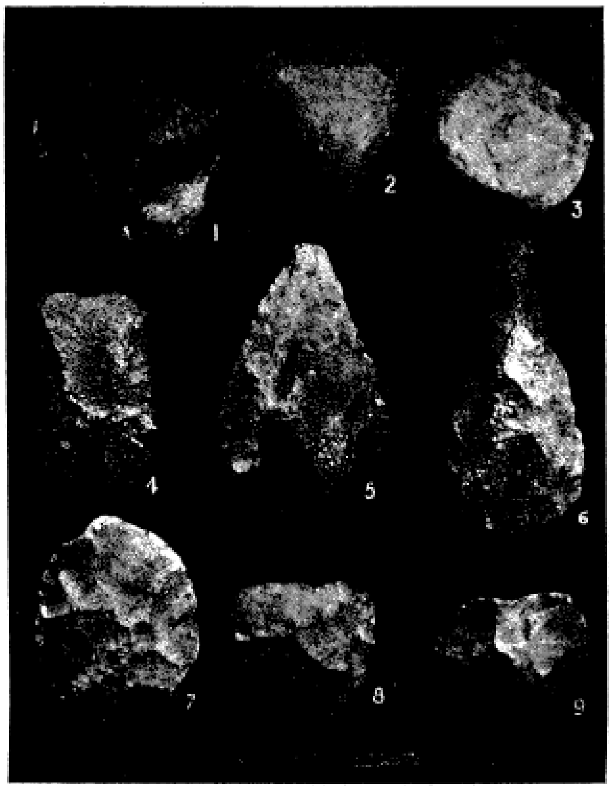
The earliest Jaina caves are those at Udayagiri and Khandagiri, excavated into the sandstone outcrops near Bhubaneswar in Orissa in the first century B.C. But it was only from the sixth century onwards, down to the eleventh, that numerous Jaina and Brahmanical cave-temples came to be excavated in all parts of

India, the northern ones into the softer rocks like trap and sandstone, and the southern ones in the harder rocks—granite and gneiss. Such Jaina cave-temples are to be found as the culminating series at Ellora.

The southern cave-temples were excavated by the Chalukyas of Badami (sixth and seventh centuries), their successors the Rashtrakutas and their subordinates (seventh-ninth centuries), the Pallavas of Kanchi (seventh-ninth centuries), the Pandyas of Madurai (eigth and ninth centuries), and the minor dynasties in that area. Generally, these cave-temples consist of an oblong pillared hall (*mandapa*) with a pillared facade in front and shrine-cells, one or more, behind. Often, the shrine-cells are excavated into the lateral walls.

The Pallavas also originated the mode of carving out entire boulders into a temple, complete from the finial down to the base, imitating at once a structural model both in its external and internal aspects. Such are the so-called *rathas* of Mahabalipuram. These were imitated by the Rashtrakutas in the famous Kailasa at Ellora, and the later and smaller Jaina version in the same place. The Pandyas have left a single monolithic temple at Kalugumalai in the far south. Within the same category, but in a different style, is the temple at Dhamnar in central India.

In the north, the earlier Gupta temples were simple flat-roofed structures. It was only later, in the sixth century, that temples with the characteristic superstructure (*sikhara*) came to be built. The early Chalukyan temples of the Deccan (seventh and eighth centuries) typify both the northern and southern styles. The southern-style structural temples of the Chalukyas are the precursors of a chain of later styles in the south, viz., the temples of the Rashtrakutas, the



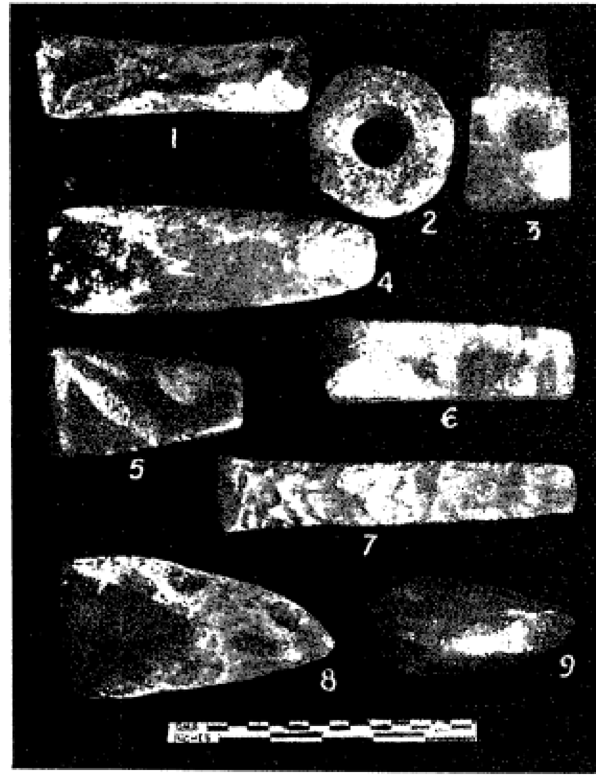
A. *Palaeoliths. Sohan valley : 1 (ASI); Guler : 2 and 3 (ASI) ; Sonita : 4 (ASI); Attirampakkam : 5 (ASI); Chitorgarh : 6 and 7 (ASI); and Giddalur : 8 and 9 (ASI)*



B. *Tools of Series II. Nagpur area : 1 (ASI); Nevasa : 2, 5 and 8 (Deccan College); Bundelkhand : 3, 6,7 and 10 (Deccan College); and Bagalkot : 4 and 9 (Deccan College)*



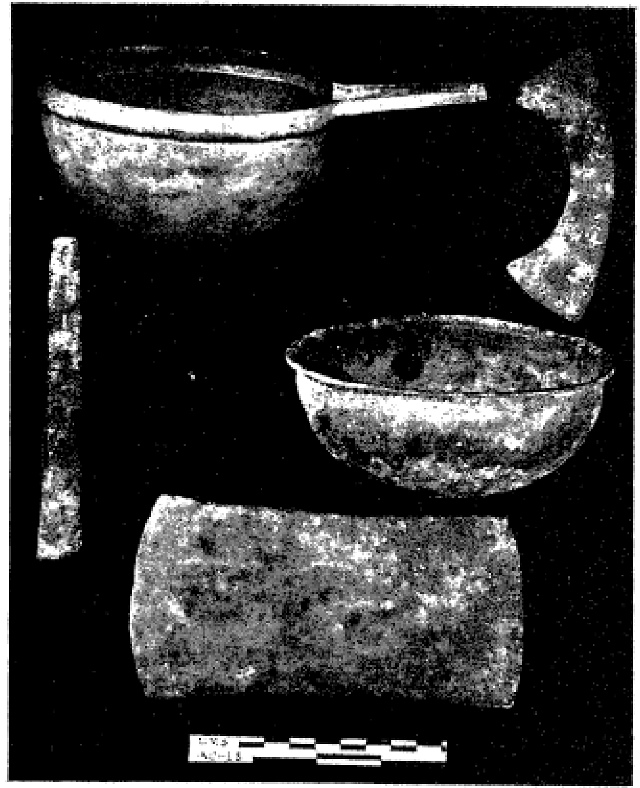
A. *Microliths. Sawyerpuram Teris : 1, 3, 6 and 14 (ASI); Birbhanpur : 2, 4, 5, 7, 9, 10, 11 and 16 (ASI); and Langhnaj : 8, 12, 13 and 15 (Deccan College)*



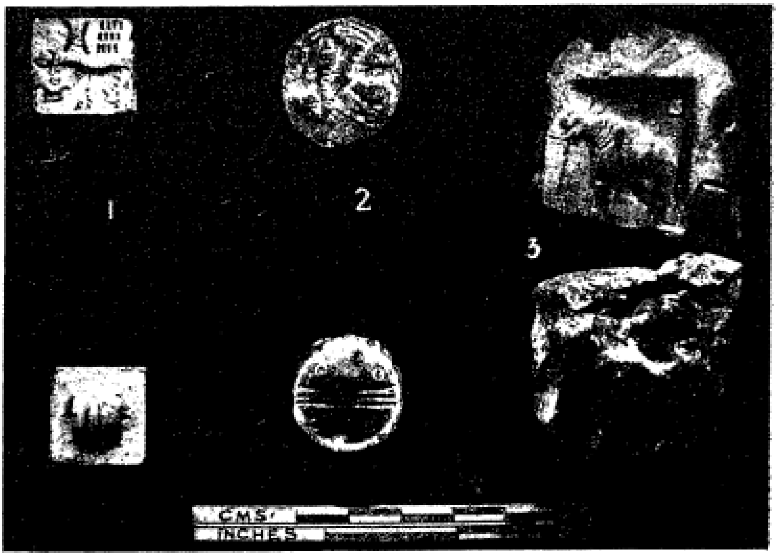
B. *Neoliths. Burzahom : 1, 2, 4 and 5 (ASI); Baidyapur: 3 and 6 (Baripada Museum); Thakurani : 7 (ASI); Brahmagiri : 8 (ASI); and Sanganakallu: 9 (Deccan College)*



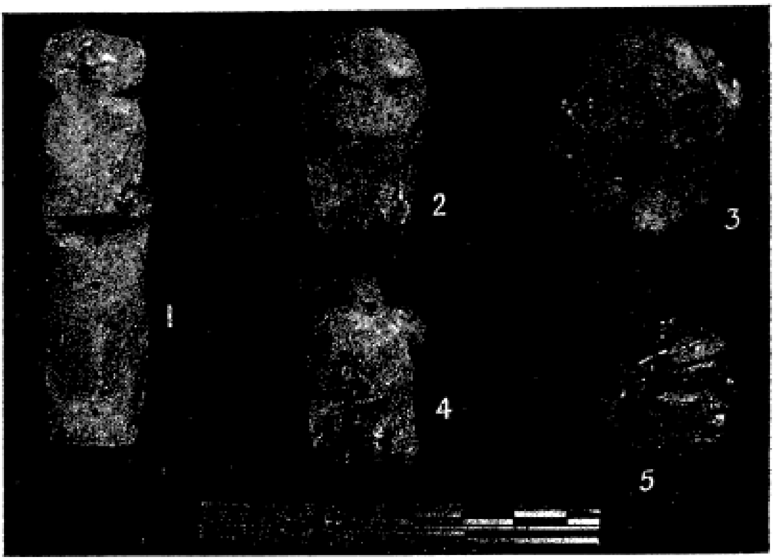
A. *Burzahom : bone implements (ASI)*



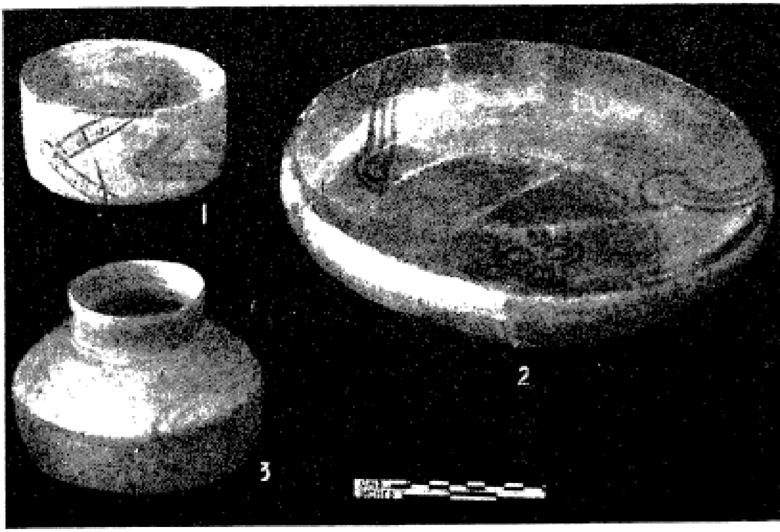
B. *Khurdi : copper hoard (Jodhpur Museum)*



A. *Seals and sealings. Kalibangan : 1 and 3 (ASI); and Lothal: 2 (ASI)*



B. *Terracotta figurines. Lothal : 1, 2 and 4 (ASI); and Kalibangan : 3 and 5 (ASI)*



A. *Navdatoli : chalcolithic pottery (Deccan College)*



B. *Painted Grey Ware. Rupar : 1 and 3 (ASI); and Ahichchhatra : 2 (ASI)*

PLATE VI

No. 24

Fort William

Public Works Deptt.

General

Establt.

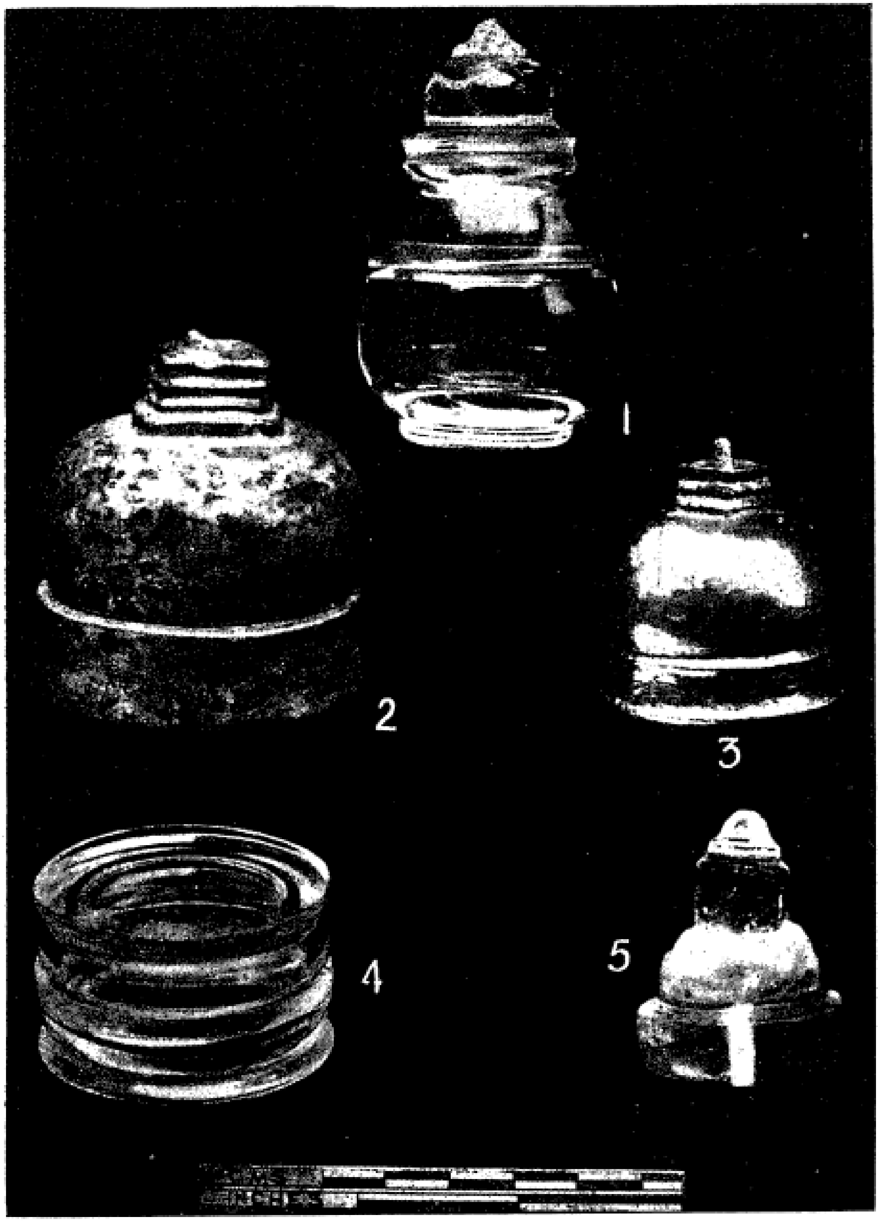
The 31st January 1862

D

Appointment

Colonel A Cunningham of Engineers is appointed Archaeological Surveyor to the Govt. of India, for employment in Behar and elsewhere, with effect from 1st Decr. last

Facsimile of orders appointing Alexander Cunningham as Archaeological Surveyor



Relic-caskets. Bhattiprolu : 1 (Madras Museum); Nagarjunakonda : 2 and 3 (Indian Museum); and Amaravati : 4 and 5 (ASI)



A. *Adichanallur : female figure, ht. 7 cm. (Madras Museum)*



B. *Nagarjunakonda : Siddhartha* (?) *ht. 8·5 cm. (ASI)*



C. *Amaravati : torso of Buddha, ht. 19 cm. (Madras Museum)*



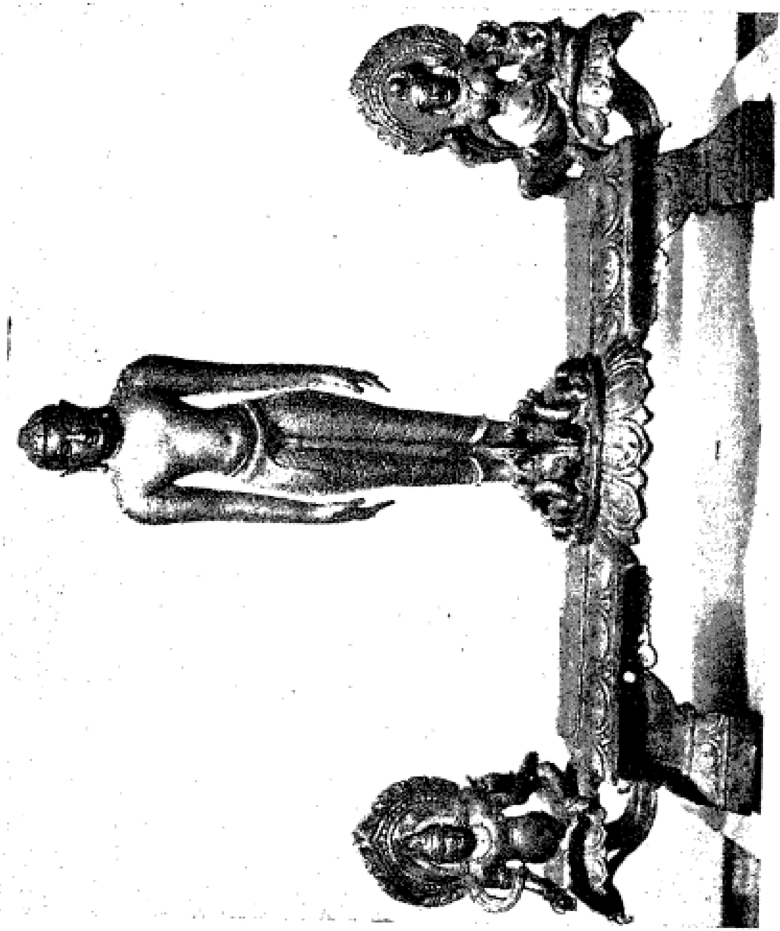
A. *Brahmapuri : embossed handle, ht.* 14 *cm. (Kolhapur Museum)*



B. *Brahmapuri : Poseidon, ht.* 13·5 *cm. (Kolhapur Museum)*



C. *Nalanda: gaja-simha, ht.* 66·5 *cm. (National Museum)*



Akota : Santinatha, ht. 35·5 cm. (Baroda Museum)



A. *Sirpur : Vajrapani*, *ht.* 28·5 *cm.*
(*Raipur Museum*)



B. *Ratnagiri : Tara*, *ht.* 7 *cm.* (*ASI*)



Tiruvengadu : Vrishabhantika with Devi, hts. 1 m. and 91 cm.
(Thanjavur Art Gallery)



Ter: ivory statuette (left), ht. 11 cm.; and female figure in bone (right), ht. 16 cm. (R. K. Lamture Collection)



Terracotta seals and sealings. *Hastinapura* : 1; *Nalanda* : 2 and 4; *Basarh* : 3 and 7; *Sunet* : 5: *Kausambi* : 6; *Paharpur* : 8; and *Ahichchhatra* : 9 (1 and 9, *ASI*; and rest, *Indian Museum*)

PLATE XV



A. *Bulandibagh (Pataliputra) : terracotta figurine, ht. 27 cm. (Patna Museum)*



B. *Chandraketugarh : terracotta plaque with a yakshi, ht. 18 cm. (Asutosh Museum)*



C. *Nilgiris : terracotta figurine from megalithic burial, ht. 23 cm. (Madras Museum)*



A. *Ter : terracotta Roman lamp-head, ht. 7·5 cm.*
(R. K. Lamture Collection)



B. *Tamluk: terracotta plaque with female torso,*
ht. 10·5 cm. (ASI)



A. *Rangmahal: terracotta panel with Uma-Mahesvara, ht. 38 cm. (Bikaner Museum)*



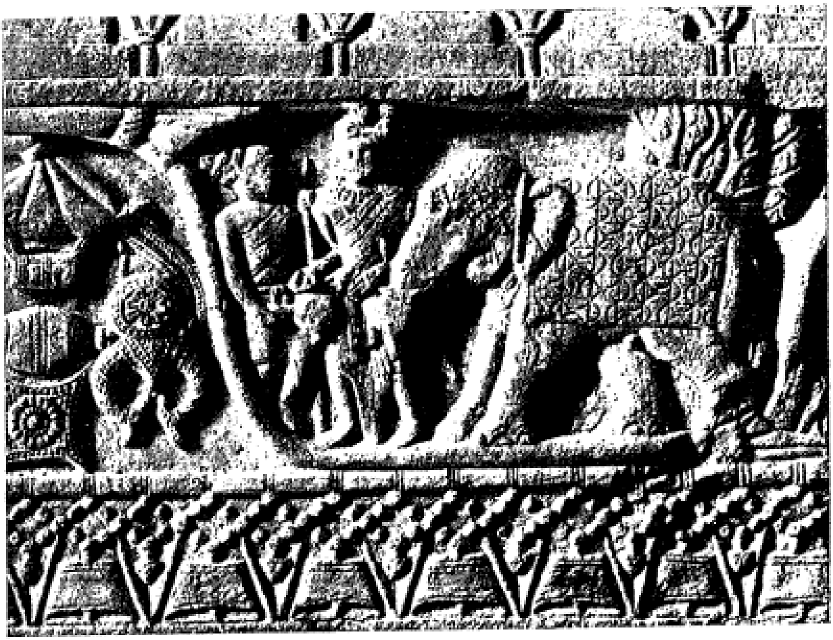
B. *Bhitargaon: terracotta panel with Anantasayin Vishnu, ht. 23 cm. (Indian Museum)*



A. *Assam: terracotta tile with gana couple, ht. 36 cm.* (*Indian Museum*)



B. *Bakreswar: terracotta panel with Krishna-lila, ht.* 15·5 *cm.* (*Asutosh Museum*)



A. *Bharhut: Vessantara-Jataka*, ht. 41 cm. (*Indian Museum*)



B. *Nagarjunakonda : Great Departure of Buddha*, ht. 36 cm.
(*Nagarjunakonda Museum*)



A. *Udayagiri : female bust, ht. 49 cm. (ASI)*



B. *Nagarjunakonda: female bust, ht. 23 cm. (ASI)*



A. *Ahichchhatra: Maitreya, ht. 67 cm.* (*National Museum*)



B. *Gandhara: Miracle of Sravasti, ht. 86 cm.* (*Indian Museum*)



C. *Alampur: Surya, ht. 1·6 m.* (*Alampur Museum*)



A. *Varuna with consort, ht. 88 cm. (Prince of Wales Museum)*



B. *Khajuraho: lady wringing hair, ht. 87 cm. (Khajuraho Museum)*



C. *Dulmi: Mahishasuramardini, ht. 1·5 m. (Indian Museum)*



A. *Avantipura : Chaturmurti Vishnu, ht. 48 cm. (Srinagar Museum)*



B. *Darasuram: Gajarimurti, ht. 1·4 m. (Thanjavur Art Gallery)*



C. *Halebid: frieze of dancers and musicians, ht. 37 cm. (ASI)*



A. *Ratnagiri: Vasudhara, ht. 62 cm. (ASI)*



B. *Amaravati: Maureya, ht. 31 cm. (Amaravati Museum)*

later Chalukyas of Kalyani, the Kakatiyas of Warangal and the Hoysalas of Mysore.

The Pallava style, as well as their unique material, the hard stones, were continued by the succeeding southern dynasties, viz., the Cholas of Thanjavur (ninth-eleventh centuries), the later Cholas and Pandyas (eleventh-thirteenth centuries) and the Vijayanagara (fourteenth-sixteenth centuries) and Nayaka rulers, in an unbroken chain down to the seventeenth century, showing a progressive evolution of parts and motifs, which extends even up to the present times.

This southern form of the temple or *vimana* is a system of diminishing storeys, each surrounded at the periphery by a string of miniature shrines, square, oblong and apsidal on plan. The ultimate storey carries a clerestory-like *griva* with the roof or *sikhara*, square, octagonal, circular or apsidal, surmounted by a finial or row of finials.

The superstructure of the northern-style *vimana* is characterized by predominantly vertical lines of ascent decorated with interlacing *chaitya*-window motifs, and crowned by lenticular or spheroidal and ribbed *amalaka*, often with similar *amalakas* at the corners and later on with miniatures of the main structure itself in between. These elements find great elaboration in the temples of Khajuraho (tenth-twelfth centuries) and develop into numerous local idioms. In the group of Orissan temples, on the other hand, the undisturbed outline of the superstructure of the *vimana* gradually curves inwards. A full-fledged Orissan temple contains, in addition to the *vimana*, a hall in front (*jagamohana*), which is usually roofed by tiers of gradually-diminishing sizes locally called *pidhas*. Another class of northern temples, widely distributed but much

smaller in number, have roofs of the shape of a half-barrel vault, which was a very common roof-form in older times and occurs in larger numbers in the south.

The temple-cities of the Jainas of the early and late medieval times are widespread, the main centres being Girnar and Palitana in Gujarat, Parasnath in Bihar, and Sravanabelagola in Mysore, besides Mount Abu and Ranakpur in Rajasthan.

In the extreme north and south, viz., Kashmir and other Himalayan regions and Kerala, the tradition of brick- and timber-architecture prevails throughout, in addition to stone, dictated by climatic conditions. The superstructure takes a definite pattern, in the form of conical or ridged roofs with gables in the Kerala area, where the precipitation is high.

Indo-Islamic architecture made its beginning with the construction of the Quwwatul-Islam mosque in Delhi and the Arhai-Din-ka-Jhonpra mosque at Ajmer. But the absorption of Islamic building-traditions materialized only in the extension to the Quwwatul-Islam mosque and the screen, carried out in about 1230, and also in the Qutb-Minar and tombs of Sultan Ghari and Iltutmish. The Qutb-Minar, for example, rising to five storeys and treated externally in unusual patterns of angular and semi-circular flutings, is essentially Islamic in conception and execution. On the other hand, the tomb of Iltutmish, with its elaborate ornament or inscriptions and geometric designs, established a general pattern of the Indo-Islamic system of decoration.

The building-activities of Alaud-Din Khalji established once for all the usage of the true arch which had first appeared in the tomb of Balban—otherwise

of no architectural merit. His 'Alai-Darwaza in Delhi, despite its moderate size and plan, has earned the reputation of being a treasured gem of Indo-Islamic architecture on account of the exquisite symmetry of form, perfect shape of horseshoe arches with spearhead fringe and technique of dome-supporting squinches.

The building style under the Tughluqs (1320-1413) tended to be heavy and massive. Their buildings are generally marked by thick and battered walls, multi-domed roofs, the use of a lintel across the base of arch, etc. Among the notable buildings constructed in this style are the tomb of Tughluq Shah, the Kotla Firuz Shah monuments, the Kali, Kalan and Khirki mosques, the tomb of Khan-i-Jahan Tilangani and the tomb and college of Firuz Tughluq—all in Delhi.

Under the Sayyids (1414-44), the architectural activities seem to have been confined only to the building of tombs. The royal tombs of Mubarak Shah and Muhammad Shah, both in Delhi, indicate a considerable improvement on the earlier model. The architectural style of the Lodis (1451-1526) was in a way the precursor of the Mughul style, its main contribution being the introduction of the technique of the double-dome in the tomb of Sikandar Lodi. The Moth-ki-Masjid in Delhi represents the mosque-architecture of the period.

The most inspiring form of the Lodi style is represented in the buildings of the Sur dynasty (1540-55). The mausoleum of Sher Shah at Sasaram in Bihar is one of the most impressive buildings of its kind, while the Purana Qila mosque in Delhi is remarkable for the perfect symmetry of form and lavishness of decoration.

In the reign of Akbar (1556-1605) and onwards began the great era of building. The tomb of Humayun in Delhi, introducing new structural devices, represents a landmark in the development of Mughul architecture. But the first major project of Akbar is the fort at Agra. At Fatehpur-Sikri also, he started the most spectacular building-activities which took shape in the form of a complex of residential and religious buildings, such as Jodhabai's palace, houses of Maryam, Turkish Sultana and Birbal and the Panch-Mahal; the Diwan-i-Khass, remarkable for the unusual treatment of its interior and containing an exquisitely-carved pillar of substantial volume; the impressive Jami mosque, built wholly in arcuate style; tomb of Salim Chishti with elegent marble screens and serpentine brackets of unique design and execution; and the architecturally-perfect Baland-Darwaza.

Architecture under Jahangir maintained the above features but not without the loss of some of its force and virility. Among the notable monuments of his period are Akbar's tomb at Sikandra near Agra, and the tomb of Itimadud-Daula at Agra. It was, however, under Shah Jahan, that the style acquired a singular prettiness and elegance. Apart from structural details, artistic inlay of semi-precious and multicoloured stones in marble of varied motifs forms the main theme of the decoration scheme. The various buildings of Shah Jahan, such as the Diwan-i-Khass, Khass-Mahal, Moti mosque, etc., in Agra Fort and the Diwan-i-Am, Diwan-i-Khass, Khwabgah and Hammam in Delhi Fort, represent Mughul architecture in its most developed form. The Jami mosque of Delhi is also architecturally remarkable and magnificent. But Shah Jahan's greatest achievement is the Taj-Mahal, which is a masterpiece of architectural style. Its various

component parts have been blended together to form a perfectly homogeneous composition of great architectural merit.

But with the end of Shah Jahan's rule, a great reaction set in. The architectural art suffered a great setback, as may be seen in the Pearl mosque at Delhi, the tomb of Rabia Daurani at Aurangabad and the tomb of Safdar Jang in Delhi.

Among the provincial styles, the Bengal style represents an arcuate style with close-set shallow panelling and rich terracotta decoration of great elegance. Among the notable monuments of Bengal are the Adina mosque and Eklakhi tomb at Pandua, and Tantipara, Gummat, Bara-Sona and Chhota-Sona mosques at Gaur.

The Gujarat style retained the use of trabeate system and introduced an exquisite device of admitting light by raising a clerestory. The notable buildings of this style are: the Jami mosques at Broach, Cambay and Mangrol; the Jami, Sayyid Uthman, Rani Sipari, Achut Kuki and Shah Alam mosques at Ahmadabad; the Jami mosque at Champaner; and the tombs of Darya Khan at Ahmadabad and of Sayyid Mubarak Bukhari at Mahmudabad.

The Malwa style, unlike that of Gujarat, is essentially arcuate, and some of its features were borrowed from the Tughluq style. Among the earliest buildings of this style are the Lat mosque at Dhar and Malik Mughith mosque at Mandu. Among other notable buildings of Malwa are the Jami mosque, Hushang's tomb and the Hindola and Jahaz-Mahals at Mandu. The later buildings are mainly palaces with baths, pavilions, etc., like Baz Bahadur's palace and Rupmati's pavilion.

The Jaunpur style was also influenced by the Tughluq style. Here the trabeate and arcuate systems are seen employed side by side. A typical feature of this style is its bold character symbolized in the huge propylon screens of the Atala, Lal-Darwaza and Jami mosques.

In its initial stage, the Deccan style is based largely on the Tughluq style but was later influenced by the building are of Persia. In its mature form, it assumed a regional character embodying grandness of conception and soundness of structural principles. The first phase is represented by the Jami mosque and the royal tombs at Gulbarga.

The second phase of the Deccan style is represented by the buildings like the Jami mosque, Madrasa of Mahmud Gawan and royal tombs at Bidar and Chand-Minar at Daulatabad.

The third and the most mature phase of this style is chiefly represented, among others, by building-activities of the Bijapur and Golkonda rulers. The Bijapur style retained its earlier quality of grandness of conception and also introduced some new features. Also typical of the style are the richness and variety of its decoration. The culmination of the Bijapur style may be seen in the Ibrahim Rauda and mosque, which are architecturally pronounced as perfect as a building could be, in structural, technical and ornamental details. Equally impressive is the magnificant Gol-Gumbad, celebrated throughout the world for its gigantic dome and whispering gallery.

The Golkonda style does not differ very substantially from that of Bijapur. Among the buildings best represented by this style are the royal tombs at Golkonda and the Jami, Macca, Mushirabad and Toli

mosques at Hyderabad. But the most remarkable specimen of the style is the Char-Minar at Hyderabad, in which grandness of conception has been deftly combined with perfect workmanship.

The style prevalent in Kashmir was different, since majority of the buildings were constructed of wood. Of the very few stone or brick buildings, the most notable is the tomb of Zainul-Abidin's mother at Srinagar. The typical wooden architecture of Kashmir is represented by the mosque of Shah Hamadan and the Jami mosque.

The Exhibition displays, in photographs and drawings, some of the leading monuments mentioned above.

SECTION VI

BRONZES, IVORIES, COINS AND SEALS[1]

BRONZES

Bronze and other metal sculptures have all along been cast in India by the 'lost-wax' process, whereby the wax-model of the subject is repeatedly coated with clay and later melted out, thus leaving behind a clay-mould to receive liquid metal for casting the desired object. For casting hollow images, mainly in vogue in Nepal, a model of the subject was first made in clay; the core thus obtained was given a coating of wax, which again was covered with a coating of clay; wax was then drained out by heating, leaving behind the desired mould. The alloy used is traditionally said to be *ashta-dhatu* (alloy of eight metals) in the north and *pancha-loha* (alloy of five metals) in the south, though a considerable number of sculptures made of pure copper have been found.

That the art of metal-casting was known to the ancients at least four thousand years ago is evident from the bronzes of the Harappa culture that have come down to us. One such bronze, now in the National Museum, is the famous dancing female figure, from Mohenjo-daro, with slender and elongated arms and legs, wearing profuse bangles.

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[1]Contributed by Shri K. R. Vijayaraghavan.

After a long gap we come to the historical age. Among the bronzes of the early centuries of the Christian era are the Kushan ones found at Taxila produced under western influence. To the early centuries also belongs the group from Chausa in Shahabad District of Bihar. Artistic perfection was reached in bronze, as in stone, in Gupta period, between the fourth and sixth centuries, which also saw technical improvements, in that life-size sculptures were produced. Artistically notable is the recently-discovered hoard of later Jaina bronzes (pl. X) from Akota in Gujarat.

From about this time, to judge from the number of extant examples, metal images seem to have become popular. In east India, during the Pala period, between eighth and twelfth centuries, existed active centres of bronze-production at such Buddhist centres as Nalanda (Patna District) and Kurkihar (Gaya District). The development of an individual style, characterized by an elegance of form and minuteness of details, marks Pala art in bronze and stone—both the plastic forms deeply permeated by contemporary Buddhist iconography. A standing Avalokitesvara and Buddha, both from Kurkihar, are exhibited here. The *gaja-simha* (pl. IX C), a figure of Buddha and a seated Avalokitesvara are representative of the products of Nalanda. At Sirpur in Madhya Pradesh flourished a centre of bronze-production (pl. XI A), also affiliated to Buddhism, almost contemporaneously with the earlier phase of the Pala school. Slightly later in date are the bronzes from Rajnapurkinkini in the contiguous Akola District. The later eastern Buddhist school is illustrated at Ratnagiri, District Cuttack, Orissa; a Tara figure of this school is on show here (pl. XI B).

In north India, the art suffered a great decline after the end of the twelfth century.

In the south, the existence of the practice of metal-casting in early times is attested to by some specimens, such as the female statuette (pl. VIII A) from Adichanallur in Tirunelveli District of Madras, presumably of the megalithic age, the image of Siddhartha (?) (pl. VIII B), recently found at Nagarjunakonda, and the torso of Buddha (pl. VIII C) from the neighbouring Buddhist site of Amaravati, both of the early centuries of the Christian era.

In the regions that came into touch with the contemporary Roman world through trade in the first-second centuries, Roman bronzes, or provincial varieties thereof, were imported; this is indicated by the figure of Poseidon (pl. IX B) and the handle of a pot (pl. IX A), both from Brahmapuri, District Kolhapur. The classical age of bronze sculptures in the south is represented by the period of the Pallavas, between the fourth and ninth centuries. The Pallava art, of which a number of specimens are available, is characterized by a mixture of grace, simplicity of design, ornamentation and plasticity. The standing Vishnu, from the Trivandrum Museum, which is displayed here, belongs to this style.

Some of the finest examples of Indian bronzes were made during the succeeding Chola period, between the tenth and thirteenth centuries. These are, generally speaking, solid, dignified and full of life and force. One of the most notable examples exhibited here is that of Nataraja, from Kondavittantidal in Thanjavur District. The Chola art is also revealed at its best in some other exhibits, for example, the Vrishabhantika and Devi (pl. XII), and the Rama-and-Sita

group from Nannilam, and Parvati from Kodiakkadu, both in Thanjavur District.

During the Vijayanagara period, between the fifteenth and the sixteenth centuries, a large number of bronzes were produced; but by this time, the style had become stereotyped and sculpture tended to become formal, lacking in plasticity and grace of the earlier style and admitting over-ornamentation. Among the later representations may be mentioned the figure of Sasta (Hari-Hara-putra), which is peculiar to Kerala only.

Ivories

Ivory-carving was an early industry in India, being mentioned in a Sanchi inscription of the first century B.C. Amongst the famous hoard of ivories found at Begram in Afghanistan there is a group which is distinctly influenced by the Indian art of the second century A.D. The craftsmanship has continued in parts of India till the present day, but ancient specimens are rare, evidently due to the fragile nature of the material.

On view here is an ivory female figure in the round (pl. XIII) of about the fifth century. This is from Ter, ancient Tagara, in Maharashtra, from which place also comes another female, figure (pl. XIII), probably representing the goddess Sri, in an allied material, viz., bone, assignable to about the beginning of the Christian era.

Coins

Coinage originated in India in about the sixth century B.C. The earliest coins were punch-marked, i.e., a variety of symbols was punched on the surface

of a piece cut out of a metal-sheet. It has been believed that each symbol was the mark of a trade-guild. Another coining-method which was approximately coeval was that of casting liquid metal into a cavity formed by joining two moulds together Though this system of casting coins remained in vogue until the third or second century B.C., or even later, another system of striking coins, with a pair of dies on which were sunk complete designs, soon came into vogue.

The earliest known Indian coins with the portrait of a ruler come from the north-west: they were issued by a ruler Saubhuti, believed to be a contemporary of Alexander. From the second century B.C., when the north-west came under the rule of Bactria, the rulers struck coins after the Greek model, with Greek titles and effigies of Greek gods. Greek influence on coinage continued under the Sakas, Parthians and Kushans—in fact, it persisted till the rise of the Guptas, who soon shook off all foreign influence and established an indigenous system of standards and designs. In the north-west, however, Sassanian coins or imitations thereof were current. Indo-Sassanian coinage influenced north India after the Guptas, from about the eighth century, when a debased currency, known as *Gadhaiya* was current.

The bull-and-horse-man type of billon coins issued by the rulers like the Tomaras, Chahamanas of Delhi and Rashtrakutas of Kanauj and the Dharwar rulers, between the eighth and eleventh centuries is, generally speaking, crude and inartistic. It is, however, to be remembered that this type was adopted by the early Sultans of Delhi in their coinage.

Very soon the Delhi-Sultans standardized their coinage and introduced a new series altogether, of different types, bearing Arabic and Persian inscriptions, generally indicative of religious belief as well as of the name of the ruling king and date. A notable feature of their coinage is the forced currency of Muhammad-bin-Tughluq Shah, rightly termed as prince of money-ministers. Another notable name in the pre-Mughul coinage is that of Sher Shah, the Sur ruler, who among other things, standardized the system of currency; this was later adopted by Akbar. The Mughul coins issued by Akbar and his successors were generally of a uniform pattern, but they also introduced some new types, to wit, the Din-i-Ilahi series of Akbar and zodiacal *muhrs* of Jahangir, which represent a landmark in coinage both in superb workmanship and beautiful calligraphy.

Interesting among the earliest coins of the south are those issued by the Satavahanas and Ikshvakus (first century B.C. to fourth century A.D.). But during the early centuries of the Christian era, Roman coins of gold and silver, which poured into the country in considerable quantities as a result of the favourable trade-balance, seem to have gained great currency.

The next currency consisted of the *padma-tankas* or cup-shaped coins, the earliest of which were struck by the Kadambas of Banavasi during the fourth to seventh centuries, and later, with their dynastic symbol, by the Western Chalukyas of Kalyani. An outstanding feature of the south Indian currency is that the rulers are not represented on their coins by their portraits, but only by their dynastic symbols.

It is surprising that very few coins of the powerful Cholas should have come down to us. Among their

extant coins, mention may be made of the 'Ceylon-man' gold and copper coins of Rajaraja I (985-1014) and the coins of Rajendra (1014-44), commemorating his conquest of the Gangetic valley.

On the coins of the Pandyas, who ruled between the sixth and ninth centuries, there are legends which have so far remained inexplicable. There is yet another group of south Indian coins issued between the seventh and the thirteenth centuries; they bear the fish-symbol and Tamil legends. These coins, however, cannot be attributed to any single ruler, as the titles found on them were shared by quite a few rulers

Of the coins of the Vijayanagara rulers, the best surviving specimens are the die-struck small and dumpy *pagodas* in halves and quarters. These were adopted as the model for their coinage by the later Mysore rulers and European companies until the introduction of a uniform standard of currency in 1835.

Some specimens of the coins described above have been exhibited in this Section.

Seals

The seals and sealings pertaining to the Harappa culture have been mentioned above. Objects of comparable utility re-appear in the historical period. While the seals of this period are generally made of hard material, such as metals and stones, sealings, except those on copper-plates mentioned below, are almost invariably made of lumps of clay, which are fired subsequent to the stamping of the seal. Often they bear on the back the impression of a string or strips of palm-leaf, with which the documents they were affixed to were tied.

The seals can be divided into two classes: secular and ecclesiastical. Secular seals again may belong to an individual, guild, office or ruler. The third category seems to have become very popular in the Gupta times; many sealings of provincial and local offices have been found in the excavations of historical cities. They mostly bear the effigy of Gaja-Lakshmi at the top and the name of the office below. The royal sealings in terracotta are not as common, but those that exist are interesting, as they are sometimes very large (a Nalanda specimen is 13 cm. in diameter) and give the genealogy of the ruler.

The ecclesiastical seals belong mostly to Buddhist establishments. There is generally at the top the common *dharma-chakra* symbol (two deer flanking a wheel), followed below by the formula 'belonging to the community of the noble monks of the great monastery at...........' (here is given the name of the monastery such as *Nalanda, Ratnagri,* etc.). The Buddhists also had the custom of burying sacred texts inside *stupas*. Pursuant of this, seals stamped with the short Buddhist creed or longer *dharanis* (esoteric formulae) written in minute characters were enshrined in small *stupas* in the east Indian centres of Buddhism.

The last type of seals are the metal sealings affixed for authentication, by means of metal rings, to copper-plate charters issued by rulers to record their donations.

A few terracotta seals and sealings are included in the Exhibition (pl. XIV).

SECTION VII

INSCRIPTIONS[1]

The invention of writing marks the advent of a new era in the development of human civilization. In India, such writings have been quite prolific, the earliest known records being those on the world-famous seals and sealings of Harappa, Mohenjo-daro and Lothal (*circa* 2000 B.C.). These, however, continue to defy the attempts of scholars at their decipherment, but some are of the view that the script on them was the precursor of the earliest historical script of India, viz., Brahmi, the use of which, to judge from extant records, originated in about the fourth century B.C. Another species of writing, which makes its first appearance in Indian records almost contemporaneously with Brahmi, is the Kharoshthi, a derivative of the Aramaic, which, unlike Brahmi, was written from right to left and was current only in the north-west. It is in these two scripts that the earliest decipherable records of India are written, and they are inscribed on all sorts of objects, like metal (copper, iron, silver and gold), stone, crystal, terracotta plaques and seals, earthenware and even woodwork, the test of their selection being their imperishability. Some records are also painted on such material but more particularly on birch-bark. The common practice appears to have been to write out the text of any record in ink (or paint) on the surface of the

[1]Contributed by Shri M. Venkataramayya and Dr. Z. A. Desai.

object and thereafter the engraver would cut the letters or inscribe them into the object for permanent record.

The earliest historical specimens of writing in India are represented by over one hundred and fifty inscriptions left by the Maurya emperor Asoka (*circa* 273-32 B.C.), written both in Brahmi and Kharoshthi, but mostly in the former. Those in the Brahmi script occur all over the country as far south as Mysore. Their wide distribution gave rise to the development of local derivative scripts which were not only the precursors of the modern scripts of India, viz., the Nagari and the Dravidian groups, but also of those of Tibet, Burma, Indo-China, Indonesia and Ceylon, etc., all of which originated when the derivatives of Brahmi in different stages of development travelled from India to these distant lands in the wake of cultural contacts and migration. The language of the earliest Indian records, i.e., those left by Asoka, is Prakrit, but in course of time Sanskrit and the provincial dialects were commonly in vogue. With the advent of Islam in India two new languages, Arabic and Persian, were introduced and the inscriptions in them were written in various scripts known as Kufi, Naskh, Thulth, Nastaliq, etc., thereby enhancing the epigraphical wealth of India.

It is the subject-matter of these inscriptions that greatly attracts the interest of scholars in the pursuit of various branches of learning. For they constitute a mine of information on nearly all facets of the civilization of ancient India, such as, political, religious, economic, social and administrative, not to mention the literary, linguistic, chronological and others of general interest.

In the present Exhibition are on show some of the very interesting inscriptions emanating from different parts of India. Particular attention is drawn to the following exhibits which are typical specimens of the epigraphical wealth of India and throw light on ancient Indian history and culture.

1. The relic-casket from Piprahwa, which bears an inscription in Brahmi assignable to the Asokan period, i.e., third century B.C., declares that the casket contained the corporeal relics of Buddha of the Sakya clan.

2. The inscribed tablet from Mahasthan (District Bogra, East Pakistan) of the third century B.C., testifies to the existence of state-granaries and public treasuries and to the concern of the state for affording relief to people in distress caused by famine. Two specific relief-measures were stated to have been adopted, viz., distribution of grain and granting of loans to the destitute.

3. A dignitary, Viyakamitra by name, under the famous Indo-Greek prince Menander, was a follower of Buddhism and consecreted a bone-relic of Buddha in a religious edifice. This is known from the inscription on a relic-casket from Bajaur in the north-west (ancient Gandhara). The inscription is in the Kharoshthi script of the second century B.C. Apart from his coins, Menander is known to us only through his mention in a Buddhist work, the *Milindapanho*, as a lay-admirer of Buddha.

4. An inscription from Ayodhya, belonging to the first century A.D., is the only inscription so far discovered which makes mention of Pushyamitra-Senapati, the celebrated founder of the Sunga dynasty, hitherto known to us only from literary texts.

5. Buddhist literary sources mention that Buddha sojourned at Kausambi in a monastery called Ghoshitarama. An inscribed frieze recovered from the excavation at Kosam (i.e., Kausambi, District Allahabad), assignable to the Kushan period, helps in determining the actual location of the site of Ghoshitarama monastery hallowed by its association with Buddha.

6. In the wake of the spread of Indian culture abroad, in the shape of Buddhism, foreign devotees of the faith, who, hailing from countries like Yavana, Gandhara and Tamraparni (Ceylon), entered, in the third century, the monasteries in the Buddhist centre of learning at Nagarjunakonda, consecrated the foot-prints of Buddha in the Great Monastery in which they resided. This is indicated in an inscription from that place.

7. The Pallavas of Kanchi, who succeeded to the rulership of the kingdom of the erstwhile Andhras and the Ikshvakus south of Krishna in the fourth century, adopted an extensive system of administration and issued their orders written on copper-plate charters, thereby initiating a practice which came to be followed by the later dynasties. One such copper-plate charter is the Hirahadagalli plates of Pallava Sivaskanda-varman (fourth century), the royal order conveyed in which was addressed to over twenty officials ranging in rank from provincial governors (*vishayesvaras*) to the roaming spies and warriors in the king's service.

8. An insight into the details of the provincial administrative system that prevailed under the Gupta rule in the fifth century is provided in the Baigram copper-plate inscription of the time of Kumaragupta I. In it the king's representative, Kumaramatya

Kulavriddhi, is found to function as the *vishaya-pati*, i.e., the provincial governor, devoted to the feet of the *bhattaraka*, i.e., the sovereign.

9. Another Gupta record of the reign of the same king, Kumaragupta I, is found incised on a Siva-*linga;* it furnishes the interesting information that Siva-Mahadeva, i.e., the *linga*, was worshipped under the name of Prithvisvara, named after the donor Prithvisheña, the king's official.

10. The inscription of the Buddhist master-mariner (*maha-navika*) Buddhagupta, originally discovered in the Wellesley province of the Malayan Peninsula, affords striking testimony for the spread of the Indian script and culture beyond the seas. The record belonging to the fifth century, quotes a Buddhist text and prays for the success of the mariner's journey.

11. A copper-plate charter of the sixth century opening with a verse in praise of Buddha, provides a rare instance of a royal charter praising that Master. The deep adoration with which Buddha was held by the ruling king Asankita-Bhoja is conveyed by the epithet *nishkarana-vatsala* ('affectionate without reason') applied here to Buddha.

12. The most noteworthy feature of the inscriptions of south India, engraved on both stone and copper-plates, is the extensive and elaborate account given therein of the genealogy and achievements of the family of the ruling king who issued them. By far the biggest of such charters, exhibited here, is the Karandai Plates of the Chola emperor Rajendra I, famous in history for his transmarine conquests. This charter, of A.D. 1020, consists of fiftyfive copper-sheets, held together by a copper ring, and weighs two hundred

and sixteen pounds. These constitute the heaviest inscribed copper-plate record so far discovered in India. The contents of the record are no less unique, for we are furnished here with hitherto-unknown details pertaining to the Pallava and Chola history. The respect with which this Chola king was held by the rulers beyond the seas is conveyed by the fact mentioned in the inscription that the king of Kamboja is stated to have sent his invincible chariot as a present to Rajendra Chola with a view not only to having his friendship but also to ensuring the continuity of his own prosperity.

13. The Sinnamanpur plates of the Pandya king Rajasimha II affords interest both to the historian and to the student of Sanskrit and Tamil literature. The record recounts the achievements of the donor's predecessors in both war and peace; the translation of the *Mahabharata* into Tamil, their mastering of the two languages, the setting up of a university (*sangham*) for the advancement of Tamil learning and their conquests beyond the seas are attributed to the members of the family.

14. The part played by commercial guilds in the economic life of the people is well attested by inscriptions from the earliest times in India. That even in the fourteenth century the corporate life of the guilds continued to function effectively, with all its rules and regulations, is afforded by an inscription of the reign of the Kakatiya king Prataparudra of Warangal of 1322; in it the merchant-guild called the *nanadesis* are stated to have met in an assembly and inflicted capital punishment on two enemies of the guild who had been found guilty of treachery against the guild.

The Arabic and Persian inscriptions on display pertain to some rulers of the central and provincial dynasties and range, in their dates, from the thirteenth to the nineteenth centuries. These records are not only historically important, furnishing as they do interesting information, but also provide some remarkable specimens of calligraphic art. The various styles of Arabic writing represented in these epigraphs are Kufi, Naskh, Thulth and Taliq in unconventional form and Nastaliq.

Among these exhibits, particular attention may be drawn to the undated record from Cambay in Gujarat, which can be assigned on palaeographical grounds to the thirteenth century. The beautiful Kufic calligraphy of its text comprising only *Bismillah* is worth special notice. To the same place again belongs the epitaph, dated 1284 when, it may be remembered, Gujarat was still ruled by the Rajput Vaghela dynasty. It records the death of Sharafud-Din-Murtada al-Musawi al-Husaini al-Astarabadi, who was evidently one of the many Persian settlers in Gujarat. Its calligraphy also, which is Riqa-mixed Thulth, calls for attention.

Of the records of the Delhi Sultans, the earliest, unfortunately fragmentary, represents the first, that is, the Mamluk dynasty and belongs to the reign of Shamsud-Din Iltutmish (1210-35). Inscribed in an elegant variety of Indian Naskh, this record, from Aligarh in Uttar Pradesh, mentions the prime minister Khwaja-i-Jahan Nizamul-Mulk Junaidi. The Udaipur Museum inscription of the reign of Ghiyathud-Din Tughluq Shah (1320-25), mentioning a governor of Chitor under him, is, apart from its historical importance, remarkable for its bold Naskh style of Indian

variety. The bilingual record of Nusrat Shah Tughluq (1395-99), from Mangrol in Gujarat, is one of the only two surviving records of that ruler and mentions the making of rings and loops of the fort-gates in 1395, by Malik Musa, a brother of the governor of Gujarat. Another variety of Naskh marks the calligraphy of its Persian text, while the Sanskrit version is written in Nagari characters. The Mughul emperor Jahangir is represented in the Delhi Red Fort inscription, recording the construction of a bridge in 1621-22. It is particularly remarkable for its calligraphy, which is Nastaliq of a high order.

Of the two records of the provincial rulers on display, one from the Baroda Museum assigns the building of a fort in 1405 to the then governor of Gujarat, Zafar Khan, who later founded an independent dynasty. The calligraphy of this epigraph again represents a peculiar style which is basically Naskh but contains strong Taliq and Bihar flourishes. The Bengal inscription from the Indian Museum, Calcutta, belongs to the reign of Alaud-Din Husain Shah (1493-1519). Dated 1519, it illustrates the typical Bengal variety of calligraphy termed as the 'bow-and-arrow' type.

Lastly, mention may be made of another Red Fort inscription, which though of a much later period, is quite interesting othewise. This epigraph, executed in fairly-good Naskh style, commemorates the excavation of a well in 1840-41 by Bahadur Shah, the last Mughul emperor (1837-58). Its text, a chronogram in Persian verse, was also composed by the emperor whose poetical name was Zafar.

SECTION VIII

TERRACOTTAS[1]

As a popular medium of the expression of artistic urge, no class of antiquities from ancient sites can surpass in number and beauty the terracottas or baked clay figures. Clay being more plastic than any other substance, lending itself to modelling when wet, and more durable than other conventional material when fired, a large number of terracottas have survived and are often found by excavation or from the surface. Side by side with sophisticated products in this medium, we find a large variety of them produced by the folk-artist: they comprise not only objects of religious, ritualistic and decorative import, but toys representing human beings, animals, rattles, carts and the like.

In this Section are on view specimens of this popular art through the ages. The earliest specimens, from Kulli and Zhob valleys in Baluchistan (now in Pakistan), depict the artistic expression of the proto-historic peasant-communities. The clay figurines from the Harappan sites, outnumbering all other forms of statuary, consist of a variety of animal and human figurines. Of them, the female figurines perhaps represent a type of the mother-goddess, profusely adorned with applied ornaments. The terracottas from the recently-excavated Harappan sites like Lothal in Gujarat and Kalibangan in Rajasthan and chalcolithic sites of the central India and the Deccan

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1. Contributed by Shri M. N. Deshpande.

can be seen in Section I, where they are kept in association with other objects of the period.

After the lapse of half-a-millennium or more, when we come to the Mauryan and Sunga periods of the fourth to first centuries B.C., we find a phenomenal exuberance of the artistic activity. Numerous specimens are reported from sites like Pataliputra in Bihar, Mathura, Kausambi, Rajghat and Ahichchhatra in Uttar Pradesh and Tamluk and Chandraketugarh in West Bengal. The earliest specimens of this period show archaic features and are modelled by hand. The grey-colour female figurines from Mathura on view are specimens of this type. The Mauryan terracottas from Pataliputra are unique specimens: the standing female figure (pl. XV A) in the round is of exquisite beauty and ornamentation.

Moulds for fashioning complete terracottas came into vogue with the advent of the Sungas; the two terracottas from Tamluk and Chandraketugarh (pl. XV B) are fine specimens of this class. Specially noteworthy is a female terracotta head (pl. XVI A) from Ter (ancient Tagara) in Maharashtra—assignable to *circa* second century A.D., with its unmistakable Roman affinity. It forms part of a suspension-lamp described as *yonaka* ('of Roman origin') in an early inscription, as can be seen from the remnants of an iron rod in the upraised knot over the head and the funnel-like lip on the rear side of the head for pouring oil.

A crude terracotta from a megalithic burial from the Nilgiris (pl. XV C) is of great interest. It is modelled by hand and depicts a male figure seated on a legged stool and decorated with incised ornaments.

Coming back to Tamluk, we have a unique female terracotta plaque (pl. XVI B), which takes us to a period when the Gupta influence made itself felt (*circa* fifth century). The characteristic graceful modelling is superb.

In Rajasthân, we get good products of the Gupta tradition: the large Uma-Mahesvara (pl. XVII A) and Dana-lila terracotta plaques from Rangmahal are notable.

The brick temples of this period were embellished with terracotta panels in bas-relief. Vishnu lying on the serpent Sesha (pl. XVII B) from the brick temple at Bhitargaon is a fine example of this type.

The Gupta terracottas consist mostly of plaques pressed out of moulds with shallow relief, though specimens with deeper relief, like Siva and Parvati figures from Ahichchhatra, are also met with.

The use of terracotta panels for decorating structural edifices continued in early and late medieval periods; a seated drummer on a terracotta plaque from the brick temple of Paharpur and dancing *ganas* (pl. XVIII A) and the Krishna-lila (pl. XVIII B) on terracotta tiles from temples in Assam and Bengal belong to this type.

The tradition survives even today in all parts of India.

Section IX

STONE SCULPTURES[1]

In tracing the history of Indian sculptural art, as of some other classes of objects, we have to jump from the Harappa culture to the Mauryan period, a gap of roughly a millenium and half. In the Mauryan period, two distinct art-traditions are noticeable: the indigenous art, of which the free-standing *yaksha*-figures from Parkham (Mathura), Patna, Besnagar, etc., and the exquisite *yakshi* from Didarganj (Patna) are the leading examples; and court-art of Asoka, as typified by the animal-capitals on pillars erected by him, highly sophistated presumably under Iranian (Achaeminid) influence. Mention should also be made of his rock-cut elephant figure at Dhauli near Bhubaneswar.

The railing and gateways of the *stupa* of Bharhut in central India, dating from 150 B.C. during the period of the Sungas, the successors of the Mauryas, vividly depict in relief figures of *yakshas* and *yakshis*, *nagas* and celestials, lotus and other vegetal motifis and fine animal-studies, besides containing narrative panels of Buddhist *Jataka* stories (pl. XIX A) and scenes from the life of Buddha, all conceived in an atmosphere of natural and joyous freedom.

The early Satavahanas of the next century have left their fine work in the *toranas* of Sanchi, also in

[1] Contributed by Shri K. R. Srinivasan.

central India, at Amaravati and other places in the Krishna valley, and in the cave-temples of Karla, Bhaja, Kanheri, etc., in western India. At Sanchi, their sculpture in sandstone shows a development over Bharhut and fine perspective and details, as do their slightly-later work in a marble-like limestone at Amaravati, where the casing-slabs of the *stupa* afforded a vast scope for sculpture and decoration. The themes again are *yakshas*, *nagas* and celestials, *mithunas* (couples) and *sala-bhanjikas*, women, breaking or sporting with trees, interrupting or juxtaposed with narrative panels of the *Jatakas* and Buddha's life-story.

In Orissa as well, a comparable art-tradition found expression in the rock-cut and (as a just-now discovered female figure in the round, pl. XX A, would indicate) free-standing sculptures in the Jaina centres at Khandagiri-Udayagiri near Bhubaneswar, under the Aila rulers of the first century B.C. The west Indian cave-temples, excavated into the trap-rocks of the Deccan, from the second century B.C. to second century A.D., are noted for robust statuary of male and female figures of royalties and donors.

In the lower Krishna valley, the Satavahanas were succeeded, in the third century, by the Ikshvakus, who continued the tradition, both in material and style, of the earlier Amaravati art and have left great monuments and sculptures at Nagarjunakonda (pls. XIX B and XX B), Amaravati and other places in the region.

With emergence of the distinctive schools at Mathura in the Upper Gangetic valley and the north-west (Gandhara) under the Kushans in the first century A.D., Buddha, till now symbolically represented

in all context, was given an iconographic form. While in the Mathura school, using the spotted red sandstone as its medium, Buddha was conceived in the indigenous tradition and followed the figural representation of the earlier *yaksha* statues, the Gandharan form (Pl. XXI B) was exotic in its idealized human delineation and drapery, which were influenced by Graeco-Roman art-traditions. Besides figures of Buddha and elementary Bodhisattvas (XXI A), the Mathura school has also left some figures of Jaina *tirthankaras* and Brahmanical gods and goddesses. The Gandhara school was vital, extensive (it spread its influence as far as Central Asia) and long-lived and found its expression in the local stone—bluish schist—and stucco.

In north India, the classical age of sculpture is marked by the period of the Guptas, commencing with the fourth century and extending for more than two centuries. Great centres of Buddhist art developed at such places as Mathura and Sarnath, where sculptures of the greatest artistic merit, depicting Buddha himself and elementary Buddhist deities, in consonance with the growth of Buddhist iconography, were produced. Resurgent Brahmanical Hinduism also played its part in the production of sculptural pieces, which similarly reflect the development of the Brahmanical pantheon. Jainism, of which the early sculptures are almost confined to the rock-cut specimens of Orissa and the material from Mathura in the form of sculptured slabs, railing-pillars, gateways and images of *tirthankaras*, also contributed to the wealth of sculpture of the period. Irrespective of their religious affiliation, the Gupta figures at once represent a classical restraint and

mastery of the material, combined with a supreme spiritual quality seldom attained later on.

In the Deccan and the south, with the rise to power of the Chalukyas of Badami and the Pallavas of Kanchi towards the latter half of the sixth century, two equally important distinctive schools of sculpture and architecture emerged and developed under them and their successors in the respective regions. The Pallava sculpture is simple, but the figures are life-like in pose and modelling, tall, slim, graceful and tender, the faces oval with a double chin. The delineation of divine and human figures is of a very high order, and in the representation of animals this school surpasses all others. The art appears to derive from earlier local forms and, in some respects, resembles the Amaravati school. The Pallavas have left us the large rock-panels of fine sculpture, e.g., the Arjuna's penance, the Govardhana scene, the Mahishasura-mardini and other group of sculptures at Mahabalipuraṁ. Their repertoire of gods and themes was further increased by the local stories centring round the Saiva and Vaishnava saints of the south, giving rise to new and varied iconographic forms, not found outside the Tamil country.

Early Chalukyan sculpture (pls. XXI C and XXII A), in sandstone as found at Badami, Aihole and Patadkal, has some affinities with the Gupta form, but the treatment, is heavier. Early during their reign, a collateral branch, called the Eastern Chalukyas of Vengi, developed a slightly different style that recalls the Amaravati tradition, as at Biccavolu and Bezwada in the coastal areas of Andhra.

The Rashtrakutas of Malkhed, the political and cultural successors of the main Chalukyan branch,

kept up the artistic idiom and have left a great variety of sculpture at such monuments as the rock-cut ones at Ellora and the Jaina temple of Danavaiapadu in southern Andhra. Their sculptures are noted for their boldness; the figures are tall and powerful, yet imbued with a spiritual and physical poise. The Hoysalas of Dorasamudra in Mysore and the Kakatiyas of Warangal in Andhra continued the tradition of the early Chalukyas and Rashtrakutas. The tendency in Kakatiya sculpture is towards slimness and tallness which prepared the way for the development of the sculpture characteristic of the Telugu country. The Western Chalukyas and the Kakatiyas used chlorite, schist and basalt.

The Hoysala sculpture (pl. XXIII C) is, on the other hand, on a fine-grained dark schist or steatite, a very soft material lending itself to intricate carving, facilitating great elaboration of details which would appear more appropriate to metal than stone. The sculptures are short, bold and much cut out.

The primitive simplicity of Pallava sculpture is succeeded by the best early Chola scultpure (850-1100), characterized by a classic restraint and grace, somewhat reminiscent of the earlier classical Gupta of the north. The sculptures tend to be more in the round than in relief. It reached its high watermark in the sculptures of the greatest temples of the Cholas —those at Thanjavur and Gangaikondacholapuram. The sculptures combine a particularly high degree of dignity and grace with rounder faces. They are transitional between the products of the Pallavas and the Later Cholas or Pandyas (1100-1380), in which the main tendencies noticed are a steadily increasing conventionalism of form and elaboration of ornament (pl. XXIII B).

With the establishment of the Vijayanagara empire, the school of architecture and sculpture thus derived from the Pallava passes into the Vijayanagara school. Into this also merges the hitherto independent stream beginning with the Chalukyas. Vijayanagara sculptures are spread over their far-flung empire, extending over almost the whole of south India and giving rise to the provincial Nayaka style and, through it, to the modern school in the far south. The Vijayanagara sculptures, though conventional to a large extent, have their own beauty and far outnumber the earlier creations, though in the respective areas the local idiom, Telugu or Tamilian, prevails.

The Western Gangas of Talakad, who ruled from early times to the eleventh century, have left a number of temples and sculptures, the chief sites being Sravanabelgola, Nandi and Kambadahalli, all in Mysore. Exposed to Pallava and Chalukyan influence, their tradition combines features of both, with a greater leaning towards the Pallava and its derivatives in material and technique than on the Chalukya. Their greatest achievement is the colossal monolithic statue of Gommatesvara on the hill at Sravanabelgola, District Hassan, cut out of a solid granite rock in the second half of the tenth century. Over 17 metres high, it is one of the largest free-standing images in the world. The Nolambas of Hemavati (700-1100), related to the Pallavas, were likewise exposed to the influence of the Chalukyan schools. Like them, they specialized in soft stone and intricate sculpture and carving, though signs of Pallava and early Chola influences are not lacking in their art.

In Orissa, after a long gap from Udayagiri-Khandagiri, we find a local school developing in about

seventh century, in which the northern Gupta tradition is well-marked. The school developed simultaneously with the characteristic temple-architecture, if at times influenced from the south (Chalukyan). The temples bear an extreme profusion of sculptured form, both human and animal, enriched with endless patterns of decoration. The art reached its culmination at Konarak in the thirteenth century. At the Mahayana Buddhist centres such as Ratnagiri, the same art-tradition (pl. XXIV A) was brought to the service of Buddhism. Further south, at Amaravati, a large number of Buddhist sculptures (pl. XXIV B) bespeaks the influence of Mahayana Buddhism.

In Bengal and Bihar, the Palas and Senas (750-1200) have left a number of Buddhist and Brahmanical sculptures (pl. XXII C), mostly executed in a smooth grey or black basalt, with a richly-decorated background against which the principal figures stand out. The effect is generally very pleasing, though the later sculptures suffer from overdecoration.

In central India, the Chandellas have left a number of great temples and sculptures (*circa* 1000-1100) in sandstone, as at Khajuraho and Bundelkhand. The sculptural specimens, though overloaded with ornaments, represent great vigour and mastery in the rendering of difficult and tortuous poses. The sculptures (pl. XXII B) are often fully cut out, and the facial features are sharp yet pleasing. The north Indian art developed into a separate school in Kashmir, with peculiar iconographic features (pl. XXIII A).

The Jaina temples of Mount Abu, Girnar and Satrunjaya hills built under the rule of the Chalukya kings (tenth-twelfth centuries) display an efflorescence of sculptured forms integrated with architecture and

characterized by deep-cut work. The white marble sculptures of Dilwara on Mount Abu are of the most delicate kind. There is a marvellous amount of beautiful details in the minutely-carved decoration of ceilings, pillars, doorways and niches. The thin translucent shell-like treatment of marble surpasses anything. The figure-sculpture, deeply undercut, in harmony with the rest of architecture, looks beautiful in spite of the exhuberance of ornamentation.

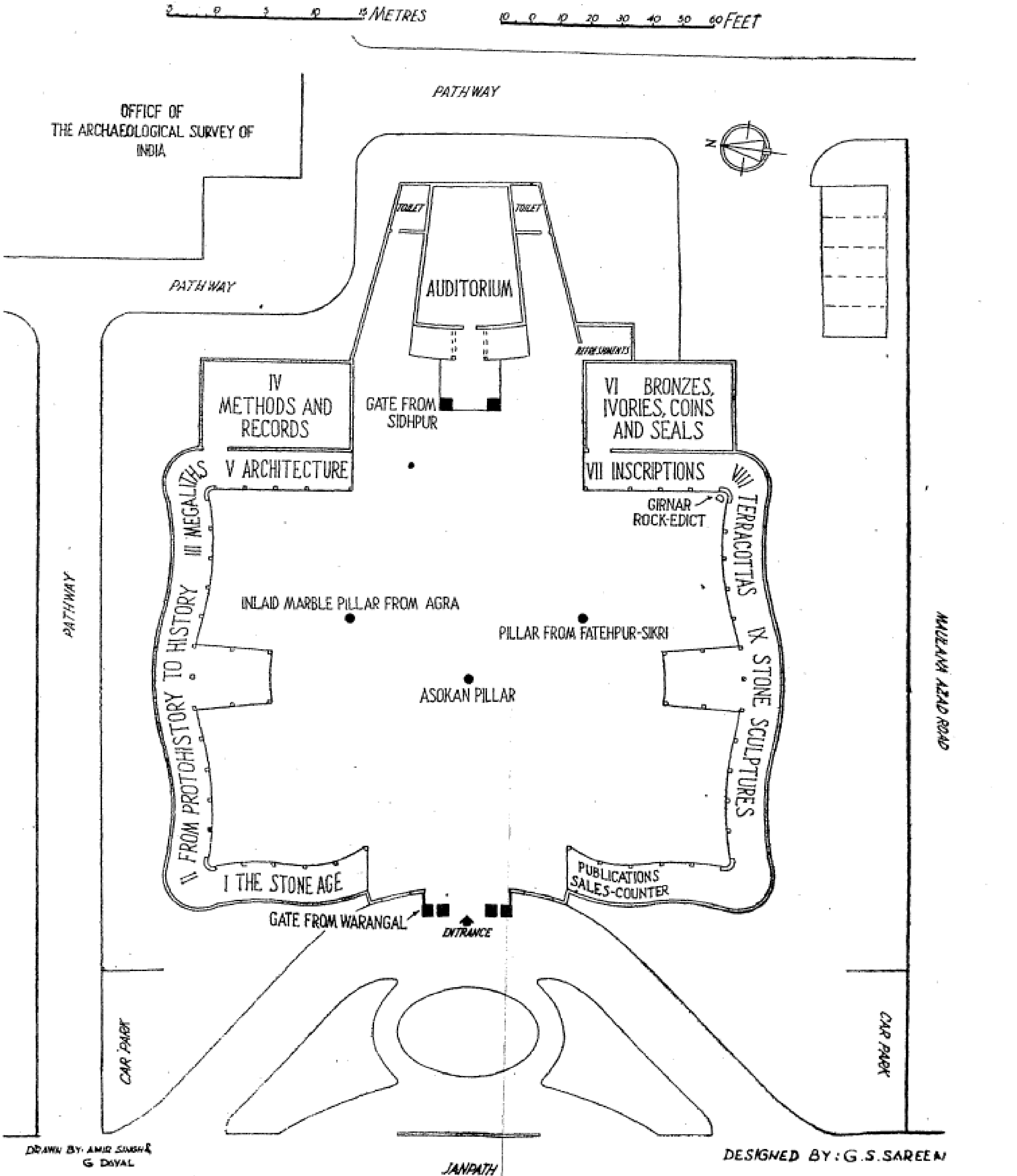
It will thus be seen that the content of Indian sculpture, though most varied, generally centres round the pantheon of the Buddhist, Jaina and Brahmanical religions and often religious stories. The sculpture, which was thus growing as a necessary and harmonious adjunct to architecture, though free and more plastic and sensitive at first, gets progressively stylized with the growth of canon and convention, though seldom does it lose its beauty and charm.

SECTION X

SCULPTURES AND MONUMENTS—PANORAMA IN PHOTOGRAPHS

This Section, located in the National Museum, displays large photographic enlargements of sculptures and monuments through the ages.

ARCHAEOLOGICAL SURVEY OF INDIA
CENTENARY EXHIBITION



DRAWN BY: AMIR SINGH & G DAYAL

DESIGNED BY: G.S. SAREEN